THE

DENTAL Digest



JULY 1945

BUY UNITED STATES WAR BONDS

USE THE YELLOW TO SEE THE RED . . .

USE THE LIGHT TO SEE THE DARK* . . .

USE THE RED TO SEE THE YELLOW . . .

USE THE DARK TO SEE THE LIGHT* . . .

Selecting tooth colors becomes simple and scientific if practiced in two stages based on the use of the Veri-chrome System of *Contrast-Comparison.*

To determine the dominant color of the tooth, "use the yellow to see the red . . . or use the red to see the yellow." Any color is visually emphasized when *contrasted* with another.

The Veri-chrome Color Guide is divided in yellow and red series to make the procedure for this identification a matter of a moment.

When the color of the tooth has been determined, "use the light to see the dark" . . . use the dark to see the light" . . ."—the *contrast-comparison* procedure for quickly identifying the correct color saturation of the tooth as shown in the diagram below.

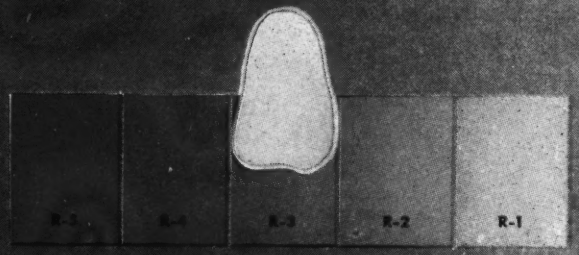
The yellow and red saturations on the Veri-chrome Color Guide are each divided progressively from 1 to 5 to facilitate this final stage of color selection by *contrast-comparison.*

Tooth color selection by *contrast-comparison* is possible only with the Veri-chrome Color Guide because of its systematic arrangement of colors in progressive saturations . . . and controlled color brilliance.

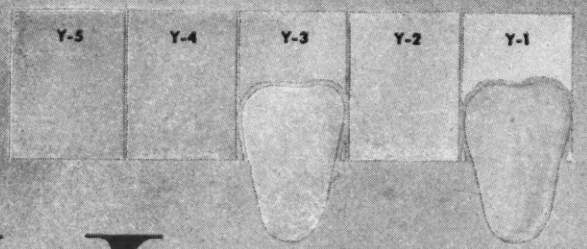
Your Universal dealer will be glad to send you a brief brochure describing the simple steps of the Veri-chrome System for tooth color selection, or write us for a copy.



The commonly understood expressions, "light and dark" are used to denote color saturations.



THE SATURATIONS OF THE DIAGRAMMATIC ILLUSTRATIONS ARE INTENSIFIED FOR EASIER PERCEPTION. THEY DEMONSTRATE THE PRINCIPLES INVOLVED IN THE CONTRAST-COMPARISON SYSTEM OF TOOTH COLOR SELECTION.



Veri-chrome

tooth colors now available in

FIVE-PHASE ANTERIORS DR. FRENCH'S POSTERIORS *(new carvings)*

NUPON ANTERIORS AND POSTERIORS

UNIVERSAL DENTAL COMPANY • 46TH at BROWN STREET • PHILA. 39, PA.

THE DENTAL Digest

VOL. 51 NO. 7

July 1945

Preservation and Transfer of the Natural Bite, *Myrton J. Billings, D.D.S.* 364

A Technique for Silicate Cement Restorations in Anterior Teeth 370
Godfrey Schroeder, D.D.S.

Hidden Excesses of Supplies (An Abstract) . . . . 372 Maxillofacial Injuries (An Abstract) 372

The Surgical Retention of Full Dentures, *Leon Lakner, M.D., D.D.S.* 373

Clinical and Laboratory Suggestions 376

1. Protection of a Root Stump for a Dowel Crown. 2. Controlling Hemorrhage in Making Proximal Preparations in Posterior Teeth. 3. An Extension Nozzle for an Oil Can. 4. Soldering a Contact Point. 5. A Knife for Trimming Modeling Compound. 6. An Amalgam Matrix for Concave Root Surfaces. 7. An Economical Syringe Holder. 8. A Mandrel Used as a Matrix Band Holder. 9. A Method of Removing Cement from Slabs and Spatulas. 10. A Protective Case for Wax Patterns Before Investment. 11. An Economic Headrest Cover. 12. A Hygienic Procedure for Fixed Bridges.

Facial Prosthesis, *Arthur H. Bulbulian, D.D.S.* 380

Penicillin Packs in the Treatment of Vincent's Infection (An Abstract) 386

External Pin Fixation: Roger Anderson Method 388
Lieutenant Glenn E. Thistlethwaite (DC) USNR

A Helmet of Acrylic for Protection Against Craniocerebral Injuries (An Abstract) 390

Treatment of Labial Sunburn (An Abstract) 408

The Editor's Page . . . . . 387 Contra-Angles 392

EDWARD J. RYAN, B.S., D.D.S., *Editor*
ETHEL H. DAVIS, A.B., *Assistant Editor*
In Military Service
RUTH K. BARNHART, *Assistant Editor*
708 Church Street, Evanston, Illinois

About Our CONTRIBUTORS

MYRTON JEROME BILLINGS, D.D.S. (University of Pennsylvania, Thomas W. Evans Dental Institute, 1937) is a general practitioner. Doctor Billings presents a simplified technique for the PRESERVATION AND TRANSFER OF THE NATURAL BITE.

GODFREY SCHROEDER, D.D.S., is a graduate of St. Louis University School of Dentistry, the class of 1914. Doctor Schroeder wrote for THE DIGEST in April 1940, when he described the use of a metal matrix for silicate restoration. This time he presents his simple, time-saving technique for inserting silicate cement restorations.

LEON LAKNER, a graduate of the universities of Berlin, Jena, and Poznan, is at present Professor of Stomatology at the Polish School of Medicine in Edinburgh, Scotland. Doctor Lakner is the author of numerous articles published since 1934, and of the book, THE INFLUENCE OF TEETHING ON THE GENERAL HEALTH OF A CHILD, published by the University of Poznan in 1936. He describes here his technique for THE SURGICAL RETENTION OF FULL DENTURES, in which a metal locking device is used on the denture.

ARTHUR H. BULBULIAN, D.D.S., is the Director of the Mayo Foundation Museum of Hygiene and Medicine at the Mayo Clinic. Doctor Bulbulian is an authority on facial reconstruction by the prosthetic method. He discusses here the various types of materials that have been used in facial prosthesis, and presents the advantages and disadvantages of the two with which best results are being obtained at the present, prevulcanized latex and elastic plastics.

LIEUTENANT GLENN E. THISTLETHWAITE (DC) USNR received his D.D.S. at Northwestern University, Dental School, in 1943. Doctor Thistlethwaite has been in the Service since he served his residency in oral surgery at the Cook County Hospital in Chicago. He discusses the advantages of Roger Anderson external pin fixation in treating mandibular fractures and reports three cases as illustrations of the technique.

Copyright, 1945, Dental Digest, Inc. See page 356 for Subscription Data, etc. The magazine is mailed on the fifteenth of the month of issue.

Preservation and Transfer of the Natural Bite

MYRTON J. BILLINGS, D.D.S., Brooklyn

The time to plan the construction of dentures is while teeth are still present in the mouth, not after they have been extracted. Accurate records should be made and existing individual anatomic peculiarities noted for their influence on the jaw when it becomes edentulous. In this way the lost dimensions are preserved and transferred to the replacements.

Inasmuch as resorption of the alveolus affects the mechanical and functional stability of dentures, postoperative records are necessary during the first few months following extractions. A simplified technique to record these changes is described.

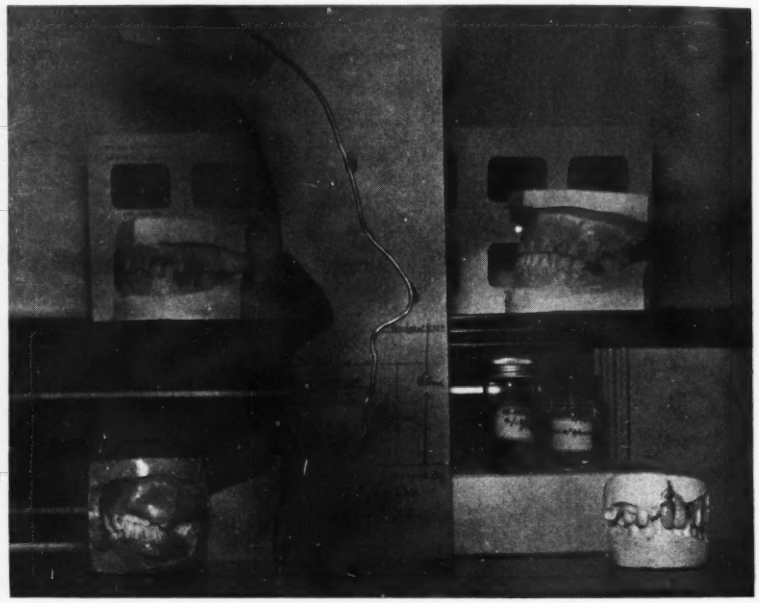


Fig. 1—Dental records: Profile records, facial measurements, full mouth roentgenograms, study models, and preserved extracted teeth.

PRESENT DAY full denture prosthesis emphasizes the restoration of vertical dimension and correct anatomic articulation for the edentulous jaws. Complicated techniques and instruments have been devised to achieve this purpose. The theory involved is based on the plane of occlusion of the human dentition being at a certain point, and the articulation of dentures being similar to the articulation of perfect natural dentition.

A study of many mouths before and after extraction has convinced me that no set of rules can be applied successfully to every case. Every mouth is an individual problem, complicated by anatomic variations which influence the design and construction of the dentures.

The extent and number of variations can be duplicated in the dentures only when teeth are present in the mouth. We are thus dealing with known and obvious conditions. The edentulous mouth is devoid of guides and landmarks except for anatomic peculiarities common to the upper and lower jaws. The edentulous

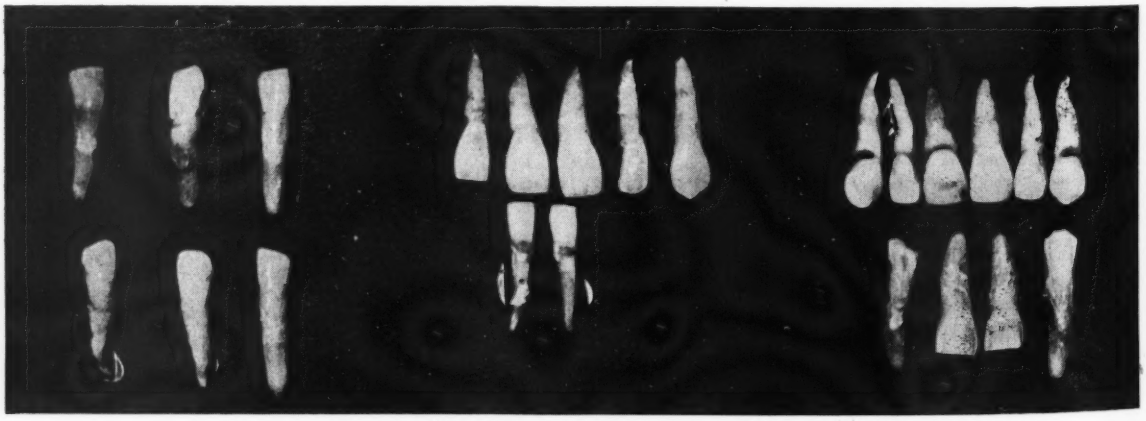


Fig. 2—Peculiarities and variations in extracted teeth.

mouth has lost its biting strength and the point of orientation. The lost elements, unknown, can never be replaced regardless of technique.

More emphasis should be placed on recognizing conditions when they exist and recording them before they are lost. In this way the result desired is known, the work becomes purposeful, and guess work is eliminated. The time to obtain records is while the natural teeth are still in place. Accurate, detailed, and complete records should become routine.

Procurement of Records

The necessary records include (Fig. 1):

1. Profile records and facial measurements: These are secured before the remaining teeth are extracted. A simple profile record can be made by adapting a length of soft solder to the outline of the face and tracing this on a piece of cardboard. The facial measurements from the bridge of the nose to the symphysis of the chin and from the upper lip to the chin can be recorded on the profile record for future reference.
2. Full mouth roentgenograms.
3. Perfect study models.
4. Mounting of extracted teeth on models to occupy the same position as they did in the mouth before extraction. This is done by taking a compound impression of the anterior teeth and setting the extracted teeth in place before the model is poured.
5. Preservation of extracted teeth with a record of their color shade, peculiar color markings, and anatomic variations (Fig. 2).

Common Variations Observed

1. Deviations in the midline.
2. Extreme overbite and overjet.
3. Natural teeth in abnormal position.
4. Anatomic variations of natural teeth which do not conform to facial form or measurement.
5. Exostosis of either jaw.
6. Irregular or reverse curve of Spee.
7. Crowding of natural teeth, spaced teeth, agenetic or supernumary teeth.

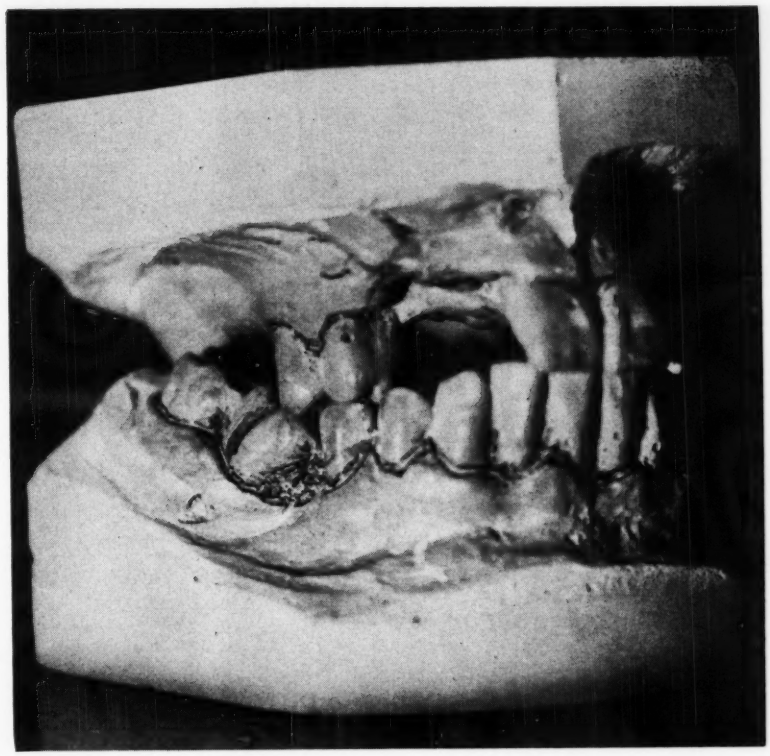


Fig. 3—Model of teeth before extractions, showing gingival recession and alveolar destruction.

8. Deformity of jaws due to malocclusion.
9. Cross bite, unilateral or bilateral.
10. Excessive and irregular alveolar resorption due to periodontal disease conditions.
11. Abnormal position of the mandible.



Fig. 4—Pre-extraction model of jaws with a few anterior and posterior teeth present.



Fig. 5—Model (same as Figure 4) re-articulated following extraction of posterior upper teeth on one side.

Prerequisite Conditions

1. Remaining teeth in good position.

2. Sufficient teeth to record an accurate pre-extraction bite.

3. Absence of disease in gingival tissues and alveoli, and malposed and unusual tooth formation.

4. Absence of extreme bite closure caused by severe wear.



Fig. 6—Remaining teeth cut off the upper model and the osseous areas trimmed to relieve undercut areas.

Impression Technique for Securing Study Models

The following techniques describe the transfer of the natural bite, and the influence of these variations in full denture construction.

Many Teeth Present—1. Hydrocolloid or alginate impressions are taken.

2. Models are poured and mounted on a parallel plane.

3. Variations found (Fig. 3):

a) Extreme gingival recession.

b) Alveolar destruction.

c) Flat ridges in the edentulous state will require considerable restoration of vertical dimension.

Anterior Teeth and Few Posterior Teeth Present—1. Hydrocolloid or alginate impressions are taken.

2. Models are poured immediately.

3. Biteblocks are constructed and a careful registration of the bite is made.

4. The bite blocks and models are articulated.

5. The models are duplicated, and a second articulation made. *Note*: If alginate impression material is used and the model carefully removed, a second model can be poured in the same impression. One set is for study purposes and future reference, and the second set is the working model.

6. Variations and their requirements (Fig. 4):

a) The right edentulous area is higher than the left and will require a longer tooth.

b) The alveolar process from the cuspid to the central incisor is osseous and will require reduction.

c) The teeth are thin labiolingually, showing marked lingual wear.

d) There are pronounced overbite and overjet, which must be reproduced exactly.

e) The left cuspid and lateral and central incisor area recede. The replacement at this point will require plumping to give contour to the lip and a natural appearance to the vermillion border.

f) The left molar area is osseous and will require reduction during extraction.

g) The lower jaw has deviated distally. The lower midline is out of line in comparison with the upper.

Bite Transfer Technique

1. The posterior teeth to be extracted are cut off the working model and a new bite is constructed to include these areas. The bite is made to occlude with the remaining lower teeth in the articulator.
2. The teeth are extracted and are set aside in preserving solution.
3. Several days later the upper bite is inserted in the mouth and a corrective wash is taken in occlusion with the lowers, one side at a time.
4. A new upper impression is taken.
5. The new model and bite are rearticulated and the case is ready for the edentulous setup. If there are teeth remaining, the process is repeated for the opposite side; thus the natural bite is transferred as the extraction progresses. Postoperative changes are compensated for by the bite transfer. This step can be omitted if no posterior teeth are present or if scattered posteriors remain.

Immediate Replacement Technique

1. The upper jaw is prepared for the edentulous setup (Fig. 5, preliminary casts).
2. The remaining teeth are cut off the model, and the osseous areas are trimmed slightly to relieve any undercut area (Fig. 6).
3. A new baseplate is adapted to the edentulous model, and a wax bite is taken in occlusion with the lower teeth (Fig. 7).
4. The articulator is opened and blue inlay wax is added where the lower teeth have made their imprint on the upper bite.
5. The articulator is closed again and the imprint is recorded in the blue wax (Fig. 8). The blue wax gives better detail and is harder, making changes due to handling less likely to occur.
6. The denture teeth are set up to approximate the position of the nat-



Fig. 7—New baseplate adapted to edentulous model, and wax bite taken in occlusion with lower teeth.



Fig. 8—Detail of bite after blue wax has been added.

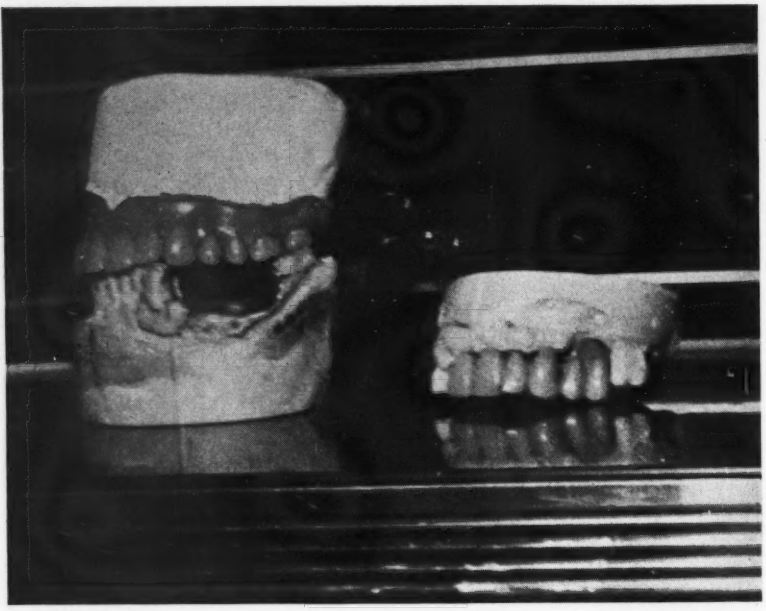


Fig. 9—Finished upper denture in occlusion with remaining lower teeth. The old partial denture served as a guide in the selection and arrangement of teeth in the absence of natural anteriors.

ural teeth which were removed from the model.

7. The upper denture is finished in the preferred material (Fig. 9).

8. An impression is taken of the finished upper denture. The model is poured and re-articulated with the lower teeth on a separate frame, and is set aside for use when the lower teeth are replaced (Fig. 10).

9. The remaining upper teeth are removed and the denture inserted.

Postoperative Records

Inasmuch as resorption of the jaw is a variable factor, it is necessary to record such changes from time to time as they occur so that a comparison can be made with the jaw before extraction. In this way changes in facial contour caused by resorption of the alveolus can be compensated for by proper contouring of the denture.

1. Several days after the immediate denture is inserted, an impression is taken of the edentulous jaw in the bite shown in Figures 7 and 8.

2. The periphery of the bite is trimmed short of the muscle turn and a corrective wash is taken (Fig. 11).

3. The corrective wash was taken under biting pressure with the lower teeth and can be re-articulated with the lower model. The impression thus secured is poured and re-articulated with the lower model (Fig. 12).

4. The impression is separated. A record of the edentulous jaw after extraction is thus secured. The amount of resorption is great compared with the jaw before extraction as shown in Figure 6.

5. Resorption can be checked from time to time by repetition of the forementioned technique.

Immediate Lower Denture Technique

The procedure in constructing the lower denture is repeated as described for the upper. Mounted edentulous models are thus available which are in the exact position they were in before the teeth were extracted. The lost vertical dimension has been preserved. The various transitionary steps from the dentulous to the edentulous jaw have been preserved. Henceforth replacements are governed by conditions that existed originally. The embarrassment of an incorrect bite is eliminated because the patient cannot develop a second bite.

Alternate Lower Denture Technique

Unless an immediate denture is imperative it is better to wait at least five days after extraction before inserting the finished denture.

1. Instead of finishing the denture before the teeth are extracted the setup is held over until after the extractions are made.

2. A corrective wash is taken in the setup, and the mouth is closed in articulation to take a bite impression.

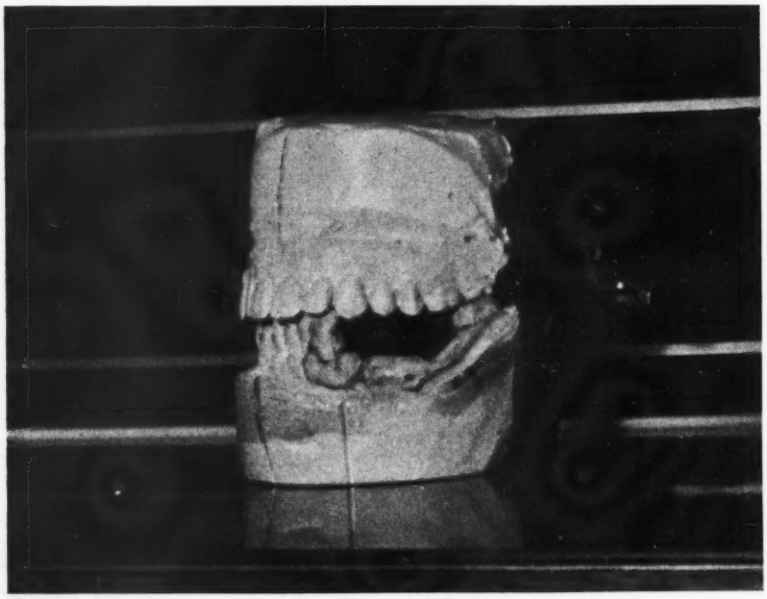


Fig. 10—Model of finished upper denture re-articulated with the lower teeth.

3. At the same visit a corrective wash is taken in the bite transfer.

4. The denture is finished and inserted.

5. A new model is poured into the bite and this is re-articulated.

6. The finished denture and the bite transfer are thus in the same relationship up to this point. Discrepancies which occur due to surgery and alveolar reduction are thus compensated for.

Conclusions

By means of the described simple technique the variables of full denture construction are controlled and recorded. One variable, resorption, is recorded within the limits of the natural vertical dimension. The amount of resorption which can take place in a few weeks is amazing; therefore, the permanent records showing the exact amount of resorption are invaluable guides for future arrangement of denture teeth and the restoration of normal facial contour. Resorption can progress more on one side than on another, giving the appearance of a jaw in cross bite relationship. Without records this would cause one to set lower teeth off the ridge, or do a cross bite setup which would be mechanically correct but functionally incorrect inasmuch as the stress of muscular action during mastication would be unevenly distributed. With records, however, the upper teeth can be placed as they were before extraction even if they were slightly off the upper ridge. The stress of mastication would thus be directly on the lower ridge, giving a greater measure of stability.

The dentures are in the same relationship with the muscles and lips as the natural teeth were. In this way stretched muscles, an unnatural facial appearance, thin lips, and cheek biting can be prevented. The final results will promote easier denture manipulation and quicker adaptability. The patient will learn to talk easily and naturally without lisping, and good mastication will likewise be a result. Moreover, the habit of developing two bites is eliminated.

2114 *Albemarle Road.*



Fig. 11—Bite of edentulous upper jaw with corrective wash.

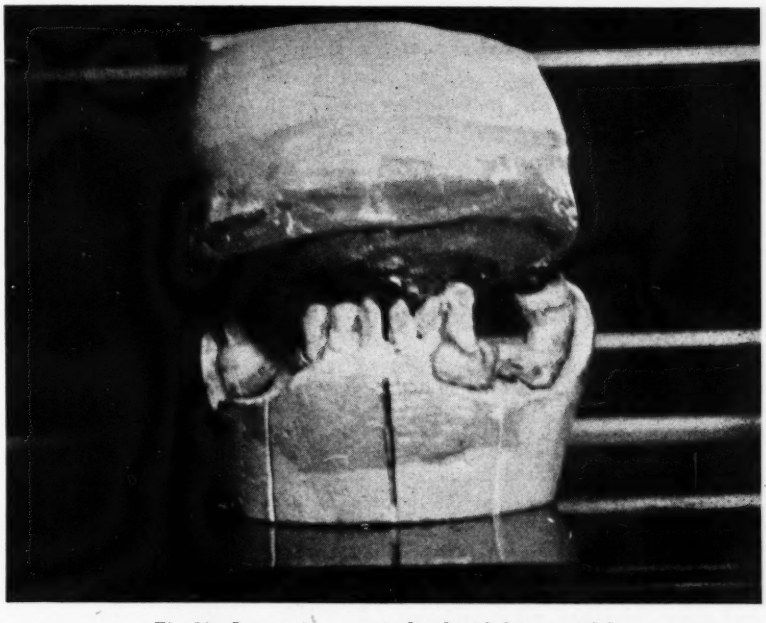
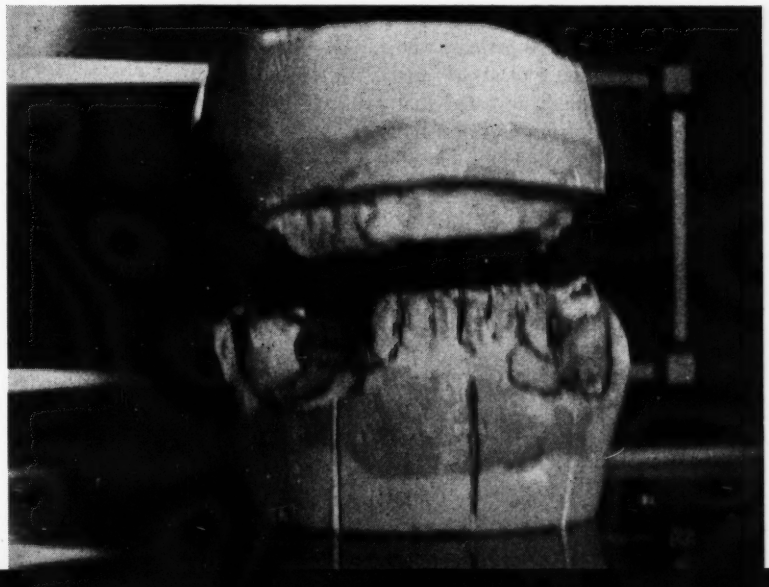


Fig. 12—Impression re-articulated with lower model.

Fig. 13—Record of edentulous upper jaw after extractions.



A Technique for Silicate Cement Restorations in Anterior Teeth

GODFREY SCHROEDER, D.D.S., Evanston, Illinois

A standardization of the technique for inserting silicate cement is long overdue. The following advantages of the technique presented are emphasized:

1. Matrix can be sterilized.

2. Matrix can be annealed.

3. Matrix can be sealed to tooth.

4. Matrix can be used repeatedly.

The results of the technique are:

1. Improved asepsis.

2. Improved restoration of tooth form.

3. Improved gelation (crystallization) to a solid mass.

4. Saving of time.

Study Report

TEN OF MY colleagues cooperated with me in making a survey of the types of restoration materials used in their patients' six upper anterior teeth. Each dentist reported on the first ten patients examined, eliminating edentulous patients, those who had no upper anterior restorations, and those who had upper anterior bridges, jacket crowns, or partial dentures.

Results—The findings of the survey, which included 100 patients who are represented as typical of any American community, revealed that 242 silicate cement restorations and 60 metal restorations had been placed in these teeth. This shows a ratio of 7 silicate cement restorations to 1 of metal. Most of the metal restorations were on the distal surface of the cuspids, gold inlays being used in a ratio of 3 to 1 over alloy restorations. More gold foil restorations were found in the labiogingival surfaces than elsewhere; most of these restorations had been inserted twenty or more years ago.

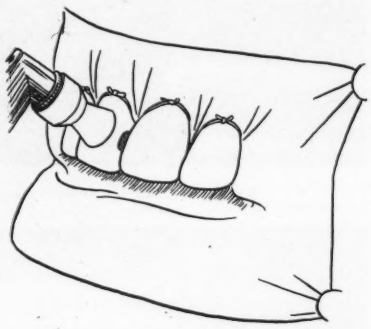


Fig. 1—The teeth are cleaned with a rubber cup before the restoration is made.

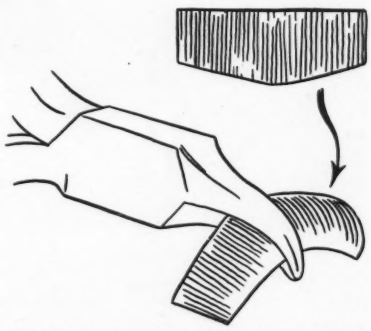


Fig. 2—Contouring pliers are used to shape the platinum matrix to fit the tooth curvature.



Fig. 3—Impression compound is applied to the end of one side of the matrix for attaching it to the lingual of the tooth.

Conclusions from Survey—The results of this study should compel serious attention. Inasmuch as it is shown that the number of silicate cement restorations placed in the anterior teeth far exceeds that of metal restorations, whether on demand of the patient or by choice of the operator, it would seem that emphasis should certainly be placed on the techniques for placing silicate cement restorations. I believe that the metal restoration is usually the better one, chiefly because the techniques for inserting the silicate cement have not been sufficiently emphasized and perfected. I am of the opinion, moreover, that a properly inserted silicate cement restoration requires at least as much, probably more, skill than does the metal restoration. The necessity for the development and improvement of techniques for placing silicate cement restorations cannot be overemphasized.

Technique

The following technique for inserting silicate cement restorations in the anterior teeth has proved to be simple, time-saving, and extremely successful. The illustrated case shows a restoration made in a cavity in the mesial surface of the right central incisor. Variations must be made, of course, when the restoration is to be placed in another surface or in another tooth.

1. The teeth are cleaned with a rubber cup before the restoration is made (Fig. 1). Any mucilaginous film that might be present is thus removed to ensure accuracy in making the shade selection of the silicate cement mix to be used, and

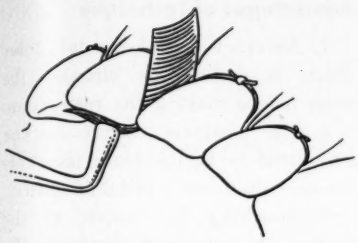


Fig. 4—A hot instrument pressed down on the band over the compound seals and burnishes the band to the tooth on the lingual.

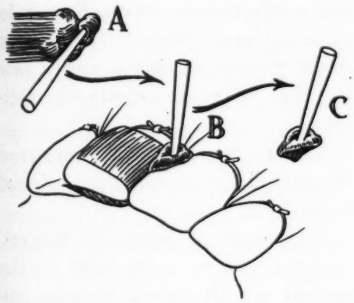


Fig. 5—Impression compound carried on a wedge (a round toothpick) (A) is tamped firmly into the gingival interproximal space (B). This compound "wedge" (C) is an aid in preserving the tooth form after the restoration is placed.

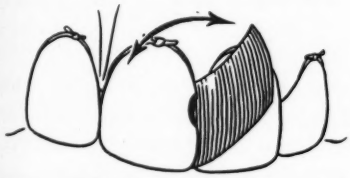


Fig. 6—Labial end of matrix swung back to expose cavity preparation.

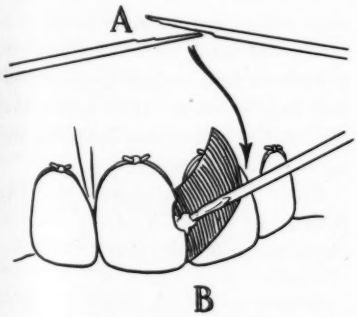


Fig. 7—(A) Applicators can be cut down to required size for placing small restorations. (B) Silicate cement mix is worked from one margin, over the cavity floor, to the other margin to prevent trapping of air under the finished restoration.

to make sure that the impression compound will stick to the tooth while the restoration is setting.

2. The cavity preparation is carried out in the usual manner, special effort being made to keep the cavity as small as possible.

3. A matrix band is cut from .001-inch or .002-inch platinum, the thickness of the platinum depending on the interproximal space through which it must fit. The matrix is annealed and sterilized by flaming over the Bunsen burner. The matrix should extend mesiodistally over both the lingual and labial surfaces, and should extend at least 1 millimeter beyond all margins. Contouring pliers are used to shape the matrix to fit the tooth form (Fig. 2).

4. A dab of impression compound is applied to the end of one side of the matrix band (Fig. 3), and it is attached to the lingual surface of the tooth. A hot instrument is pressed down on the band over the compound to seal and burnish the band to the tooth (Fig. 4). The other end of the band is brought out labially between the central incisors and is pressed to shape over the interproximal margin and the labial surface of the tooth. Variations in this step in the technique are sometimes necessary, depending on the location of the cavity.

5. Impression compound is picked up on the point of a wedge (a round toothpick serves well) and is placed in the interproximal space (triangle) on the labial surface (Fig. 5). The compound is tamped firmly into place while cooling, and the wedge is left sticking out of the compound to act as a handle in removing it (C in Fig. 5). The compound "wedge" is used later to help preserve the original tooth form after the silicate is placed. The wedge is marked so that it will be reinserted correctly.

6. The color shade of the silicate cement is selected, and the mix is made on a silicate cement-mixing slab which has been cooled to between 65° F. and 75° F. It is important that the humidity be checked to prevent moisture from forming on the mixing slab. This would affect the chemical balance of the mixture of restoration material.



Fig. 8—The matrix is sealed to the labial of the tooth by the excess silicate cement, and the compound "wedge" is reinserted in the interproximal space to hold the matrix firmly over the tooth margin.

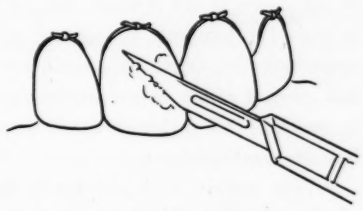


Fig. 9—The excess silicate cement is removed from the tooth surface with a Bard-Parker blade.

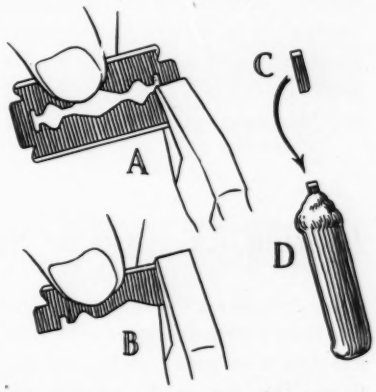


Fig. 10—(A and B) A razor blade is broken into small pieces with flat-nosed pliers. A piece of the desired size (C) is attached to a stick of compound which acts as a handle (D).

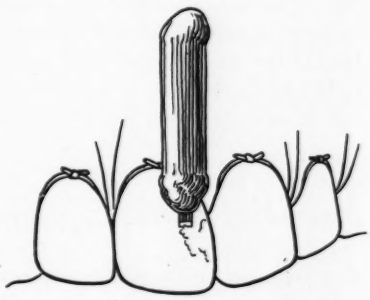


Fig. 11—The excess silicate cement on the labial surface and over the margins is shaved off with the piece of razor blade. Grinding and polishing are thus unnecessary procedures.

7. The labial end of the matrix band is swung back (like a gate) to expose the cavity preparation (Fig. 6), and a bit of saline solution is applied to the tooth cavity should the operator decide that the dentine has become dehydrated.

8. The silicate cement mix is inserted in the cavity, working in from one margin over the floor of the cavity to the opposite margin to prevent air from being caught under the restoration (Fig. 7). An applicator such as is used in swabbing throats is cut down to the desired size and is used for tamping the silicate cement into the cavity. This applicator has proved much more satisfactory in reaching all undercut areas than has any metal plugger.

9. The matrix is drawn firmly to place and is burnished over the restoration; it is sealed to the labial surface of the tooth by the excess silicate cement. The triangular "wedge" is reinserted in the interproximal space to hold the matrix firmly against the tooth margin (Fig. 8). Movement of the matrix does not take place, as when the celluloid matrix is held in place with the fingers; the silicate cement is thus permitted its gelation process to a solid mass.

10. This heterogeneous mass gels (crystallizes) to a hard mass sufficiently in about three minutes to permit removal of the matrix. Cocoa butter is applied to the tooth, and the initial excess silicate cement is removed twelve minutes later with a Bard-Parker blade (Fig. 9) taking care not to approach the margins. A piece of razor blade, which is broken with flat-nosed pliers, is attached to a stick of compound which acts as a handle (Fig. 10). The blade is thus used to shave off the remaining excess silicate on the labial and lingual surfaces of the tooth and to remove all the marginal overflow (Fig. 11).

11. In most instances it is not necessary to grind or polish the restoration with a strip or disc. This does away with the danger of injury to the restoration by overheating, and makes a subsequent appointment for this procedure unnecessary.

Advantages of Technique

1. Accuracy of choice of color shade is ensured by cleaning the teeth before making the restoration.

2. The platinum matrix can be contoured to fit the tooth more accurately than can a celluloid matrix.

3. Attaching the matrix to the tooth with compound eliminates the possibility of moving the matrix while the restoration is gelating to a solid mass.

4. The applicator used in tamping the restoration is more effective in undercut areas than is the smallest metal plugger available, and a new one can be made quickly for each case.

5. The interproximal compound "wedge" helps maintain the original tooth form.

6. Danger of injury to the restoration and an extra visit by the patient are eliminated because polishing and grinding of the restoration are unnecessary.

7. The platinum matrix may be sterilized by flaming and can be used repeatedly.

636 *Church Street.*

Hidden Excesses of Supplies

MORE THAN 1,250,000 excess denture teeth have been returned to medical depots by posts, camps, and stations. This has made possible the cancellation of a number of contracts, inasmuch as the supply service now has enough of this item to fulfill all requirements for 1945 and 1946. This is an indication that the return of excesses must be pushed vigorously, for the denture teeth had to be called in specifically. It is an indication, also, that there is hoarding in the supply warehouses, dental clinics, and the pharmacies of posts, camps, and stations. Excesses of quinine, alcohol, dental burs, and pentothal sodium recently have been uncovered and returned to depots.

This type of hoarding, which resembles the squirrel-like behavior of an overly prudent housewife, creates an artificial scarcity that induces others to hoard. In addition, it causes the supply services to relieve the seeming scarcity by letting additional contracts. Hence, in some cases, we are buying items which are in fact surplus to our needs.

A revision of TM 38-220, which soon will appear, extends supply control to the using agencies. Formerly, it went no farther than the post medical supply officer. It is hoped that this change will curtail hoarding and uncover local excesses.

—From News and Comments, *The Bulletin of the U. S. Army Medical Department,* 88:54 (May) 1945.

Maxillofacial Injuries

A SURVEY OF the North African and Sicilian campaigns showed that of the total admissions to hospitals 0.5 per cent were maxillofacial injuries. Of these, 42 per cent were battle casualties. The incidence of maxillofacial injuries compared to total battle casualties was about 2.2 per cent. In the cases reported there were no deaths caused primarily by battle-incurred maxillofacial injury.

—From Medicine and the War, *The Journal of the American Medical Association,* 127:1132 (April 28) 1945.

The Surgical Retention of Full Dentures

LEON LAKNER, M.D., D.D.S., Edinburgh, Scotland

A full denture is usually retained in position by virtue of atmospheric pressure and adhesion. The usual means of denture retention are inadequate, however, in jaws in which stability is lacking because of an anatomic abnormality. In such cases correction must be made by surgical formation of a groove or by surgical preparation of the jaws for the employment of other retentive means.

The technique for the construction of a metal locking device on the denture, and the surgical procedure necessary for retaining the specially constructed denture in position, are described.

WHEN A prosthodontist undertakes the construction of dentures, his final object is to recreate the functional and physiologic conditions in the mouth so that they resemble as nearly as possible the original conditions before the extraction of the natural teeth. Provided there is no great anatomic abnormality, the majority of edentulous patients easily adjust themselves, both mentally and physically, to the necessity of wearing dentures.

Selection of Patients

Some people, especially those of the high-strung, nervous type, require the extra assurance provided by large suction chambers or a layer of thickly spread adhesive powder to keep the dentures in position. With reference to such cases we must affirm that even the most skillfully constructed denture will fail to give that measure of self-confidence which can be afforded by surgical retention. Some of these cases, carefully selected, may be tried for the surgical preparation of the jaws for special dentures.

Other cases suitable for special dentures are those in which the lack of stability is accounted for by anatomic abnormalities such as flat palatal arches and low alveolar processes, and those with shallow sulci or heavy folds of mucous membrane and muscles tending to dislodge the denture, cases which cannot be helped by other means.

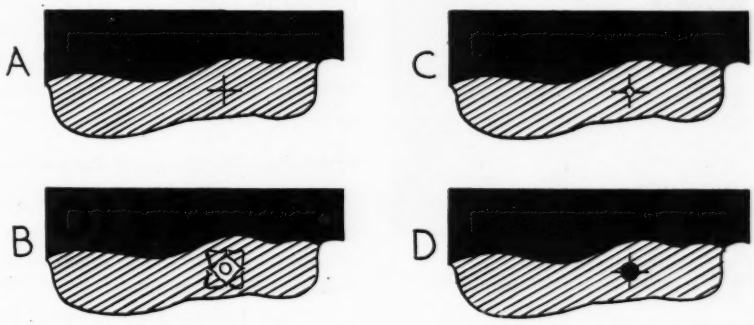


Fig. 1—(A) Incision of the mucous membrane. (B) Flaps of mucous membrane deflected and canal drilled. (C) Ends of flaps pushed inside the canal. (D) A temporary bolt inserted.

Difficulties Encountered

A detrimental factor to the stability of any denture is that with time some changes occur either in bone by resorption or in the mucous membrane when the strength of suction and adhesion decreases, resulting in the loss of stability. These changes tend to occur slowly, and the patient generally does not notice anything unusual for a considerable time. Eventually, however, he becomes aware of the continuous discomfort caused by the easy dislodgement of the dentures by the movements of mastication or speech.

In order to bring about the fullest action of the forces of suction and adhesion, the area covered by the fitting surface should be as large as possible. An additional reason for this is that the stresses of mastication are more evenly distributed over a wider area, thus obviating the possibility of any gross changes in the living tissues which form the seat of a denture.

The edentulous mandible has always presented a problem to the prosthodontist. Here the forces of suction and adhesion are less effec-

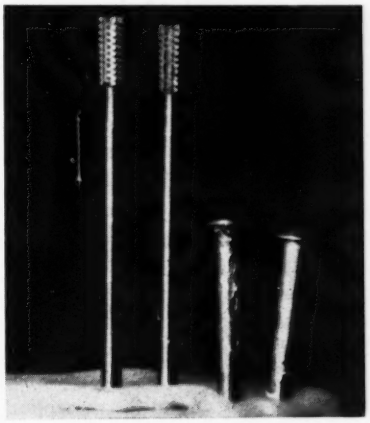


Fig. 2—Large fissure burs and temporary bolts.

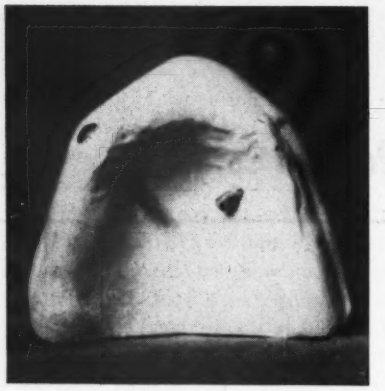


Fig. 3—Model with bolts ready for waxing.

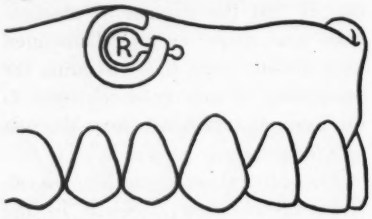


Fig. 4—Enlarged view of a locking device that opens upward.

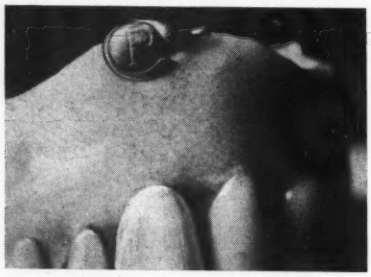


Fig. 5—Enlarged view (right side) of a locking device that opens downward.

tive than in the upper jaw. The mechanical steadiness of the lower denture must, therefore, be sought by taking advantage of all prominences and grooves and of the powerful muscles of the tongue.

The following conditions complete the picture of the difficulties encountered by a prosthodontist:

1. The flattening of the palatal vault and the complete lack of elasticity of the mucous membrane in the middle of the palate due to thinning of the mucosa by atrophy.

2. The insertions of the frenula and muscles near the edge of the alveolar process.

3. The increase of the distance between the jaws due to the resorption of bone.

4. The powerful leverage as a result of the raising of the bite and long artificial teeth.

5. The weight of the upper denture resulting from the raising of the bite.

History of Treatments

At the end of the last century attempts at the surgical preparation of edentulous jaws for the holding of specially constructed dentures were made. The results achieved then did not warrant a widespread use of any of the proposed methods.

A. Meissner[1] of Warsaw made canals in the alveolar process, into which was inserted a spring designed to retain the denture in position. The fitting surface of the denture was reduced to a minimum so that it rather resembled a bridge. In consequence, however, the stress of mastication in the region of the canal, especially in its lower wall, was so great that the ensuing bone resorption made it impracticable and not to be recommended for further use. As an alternative he prepared the three-walled canals to prevent the resorption of bone, and this proved to be a great amelioration.

Technique for Surgical Retention

The method described here was employed successfully first by Sarazin, then by myself. The steps in the construction are as follows:

1. Good roentgenograms must be obtained to establish the relation of the borders of the maxillary antrum to the alveolar ridge. The site selected for the canal on the buccal aspect of the alveolar process should be marked on the roentgenogram by a piece of wire attached to a wax plate previously fitted.

2. Under local procaine anesthesia an incision is made in the form of a cross halfway between the lower border of the alveolar ridge and the fornix vestibuli (A in Fig. 1). The opening of the canal must not be placed too high inasmuch as the head of the bolt may irritate the mucous membrane of the cheek.

3. The flaps of mucous membrane are deflected along with the periosteum and are held by an assistant while the operator proceeds with the drilling of the canal (B in Fig. 1).

4. For the formation of the canal a large fissure bur is selected (Fig. 2). The direction of the canal is toward the palate, backward, and downward. While the bur enters the alveolar bone, the operator puts one finger of his left hand on the palate in the place where the end of the bur is expected to emerge. Whenever the bur is felt to elevate the mucosa of the palate, the engine is stopped. Without withdrawing the bur, another incision in the form of a cross is made on the palatal site.

5. When the bur is withdrawn, the

[1]Meissner, A.: Surgical Retention of Full Dentures, Przeglad Dentystyczny, Warsaw, 1928.



Fig. 6—Palatal view of completed denture. Note the butterfly-like shape of metal with the bolts in position.

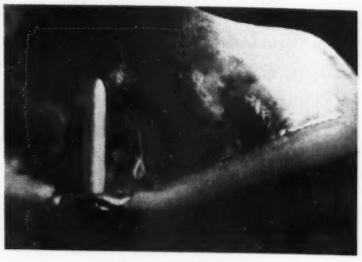


Fig. 7—Palatal view (left side) of completed denture with bolt in position.

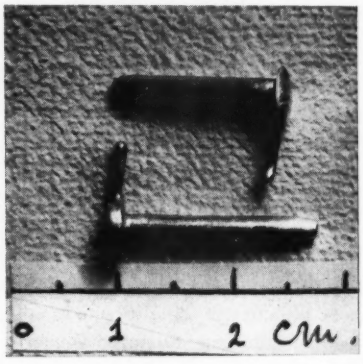


Fig. 8—Measurements of bolts used in the locking device.

ends of the flaps of mucosa, as formed by the cross incision, are pushed inside the canal from both ends and adapted to the walls as accurately as possible (C in Fig. 1).

6. A temporary bolt (Fig. 2), constructed beforehand, is now pushed inside the canal (D in Fig. 1). The size of the bolt should correspond with that of the bur used, and the buccal end should possess a flat head.

7. The same operation is now performed on the other ridge.

8. Because there is usually considerable edema following the operation, the bolts should not be interfered with for at least three to four days. After that the bolts are removed, the canals thoroughly irrigated with hydrogen peroxide from a water syringe, and the bolts again replaced. This procedure must be carried out regularly every second day for at least three weeks. Three to four weeks will elapse before the canals are completely lined with mucosa.

9. As soon as it is thought that the patient is ready for further proceedings, the compound impression is taken after the bolts have been removed and a tray prepared for the final impression. For the final impression with plaster, the bolts are replaced, their palatal ends separated from the palate by pellets of cotton wool or pieces of rubber dam to provide some extra space between the denture and the palate; then the impression is taken. Before removing the impression from the mouth, the buccal ends of the bolts must be cut free from plaster, removed from the mouth, and set in position again before the cast is made (Fig. 3).

10. The next step consists of modeling a denture in wax and casting it in gold. It may be made to cover the whole palate, or only a butterfly-like piece of the palate may be cast, provision being made to extend the wings of the butterfly to the margins of the denture where the nests for the buccal ends of the bolts will be made.

11. The new bolts must be modeled and cast separately, their buccal ends provided with a suitable hand or extension to fit the nest on the margin of the denture and form a lock when rotated into position. It is desirable that the lock should open when the hand of the bolt is rotated upward as shown in Figure 4 and not downward as can be seen in Figure 5.

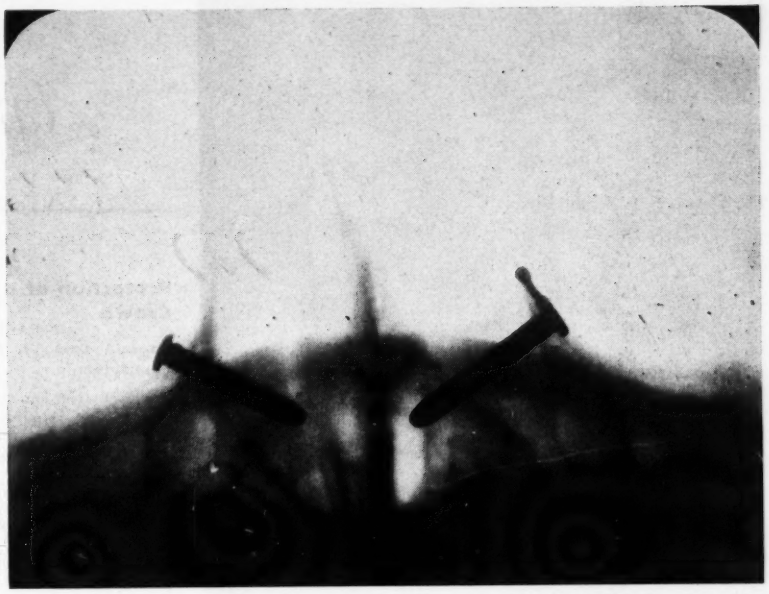


Fig. 9—Roentgenogram of upper jaw with bolts in position (without denture).

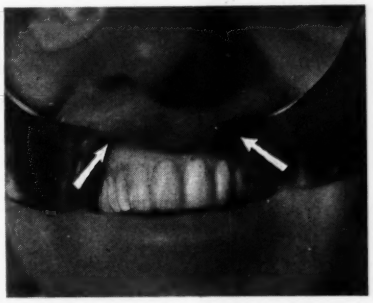


Fig. 10—Front view of finished denture in position. The arrows show the positions of the heads of the bolts.

The bolts should be identifiable as the right and the left by suitable markings. The palatal ends of the bolts should be blunt to prevent unnecessary scratching of the mucous membrane when removing or replacing the bolts. The locking mechanism (Figs. 6 through 9) gives a good service but it offers many possibilities for improvements and individual ingenuity.

12. Further laboratory proceedings consist of a routine work of articulating the teeth and processing in chosen medium. Figure 10 shows the finished denture in position.

13. A similar surgical procedure, only somewhat modified, may be employed for the lower jaw provided the resorption of bone is not too far advanced.

Comments

It should be noted that for some time after the insertion of the dentures, considerable inconvenience is experienced by the patient. This diminishes in time, however, and difficulties in removing or replacing the bolts are only experienced in the early days.

It must be noted here that the patient must be instructed *never* to remove the bolts from the canals for more than a short time inasmuch as difficulties may follow with the reinsertion of the bolts. This is particularly important during the first few months after the operation.

One of my patients, seen seven years after the dentures were made, seems to confirm the usefulness of the method. At any rate surgical retention should be tried whenever all other attempts at stabilizing the dentures fail.

44 *Marchmont Crescent.*

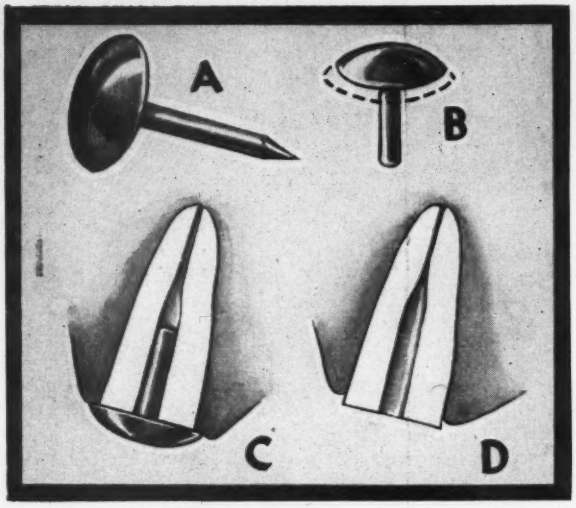


Fig. 1



Fig. 2

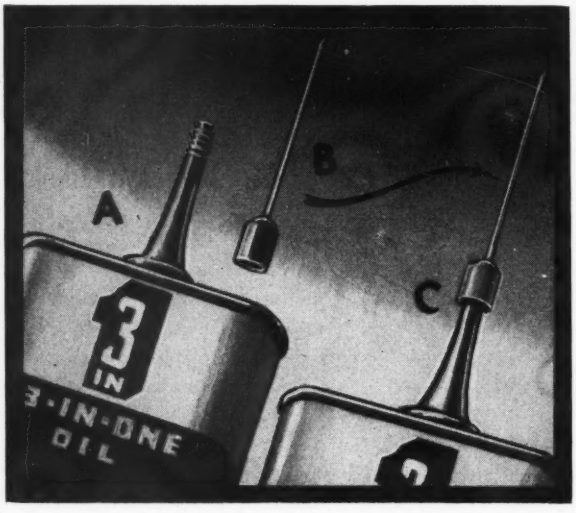


Fig. 3

Clinical and Laborato

Protection of a Root Stump Prepared for a Dowel Crown

Captain Carl W. Krauss (DC) AUS, Indiantown Gap M. R., Pennsylvania

Fig. 1—Cut an ordinary brass upholstering tack (A) to a size just a little larger than the prepared root face, and polish (B). The stem of the tack is clipped short enough to fit the post hole. Coat the nail and the under surface of the head of the nail with gutta-percha, warm, and press to place over the root (C). When the patient returns for treatment, the gingival tissue will be retracted and the root face will be ready for further preparation (D).

Controlling Hemorrhage in Making Proximal Preparations in Posterior Teeth

Lieutenant Commander W. W. Gainey (DC) USNR, Great Lakes, Illinois

Fig. 2—Small rubber bands, such as intermaxillary ligature bands, are stretched around the tooth being prepared and the neighboring teeth. The pressure exerted by the bands is sufficient to blanch the gingival tissues and to keep the field of operation clean and dry until the restoration is completed. The pressure caused by the rubber bands applied in this fashion is sufficient to cause severe destruction of the periodontal membrane; therefore, they *must* be removed before the patient is dismissed.

An Extension Nozzle for an Oil Can

Joseph I. Schnitman, D.D.S., New Haven, Connecticut

Fig. 3—Adapt a discarded 20-gauge Luer syringe needle (B) to the tip of the nozzle of the oil can (A). This gives an extension (C) that can be used to oil small and inaccessible places neatly.

Readers are Urged to Collect $10.00

For every practical clinical or laboratory suggestion that is usable, THE DENTAL DIGEST will pay $10.00 on publication.

You do not have to write an article. Furnish us with rough drawings or sketches, from which we will make suitable finished illustrations; write a brief description of the technique involved; and jot down the advantages of the technique. This shouldn't take ten minutes of your time.

Turn to page 410 for a convenient form to use.

Send your ideas to: Clinical and Laboratory Suggestions Editor, THE DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

...GGESTIONS . . . .

Soldering a Contact Point

Emanuel Robbins USPHS (R), Chelsea, Massachusetts

Fig. 4—Draw a circle with pencil at the point on the gold inlay where contact is desired (A and B). Invest the inlay in dampened fibered asbestos (C) with the penciled circle of the inlay exposed (D). Heat the exposed inlay, and flow gold solder over this area. The graphite in the lead pencil marking will confine the gold to the proper position.

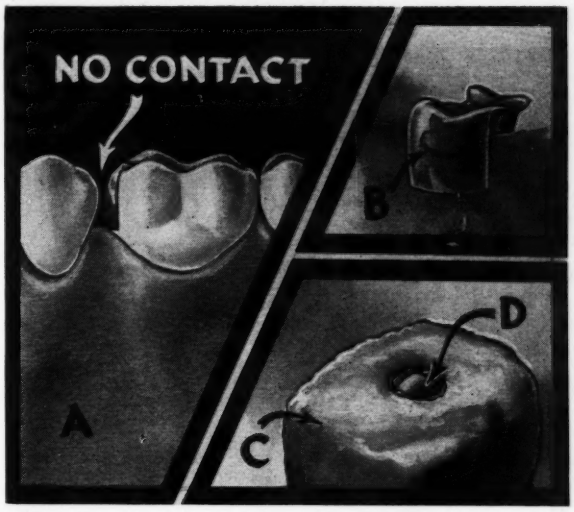


Fig. 4

A Knife for Trimming Modeling Compound

Lucian G. Coble, D.D.S., Greensboro, North Carolina

Fig. 5—A satisfactory knife can be made by using the Schick razor blade injector as a handle for discarded razor blades. The razor insert is removed from the injector (A), and the blade (B) is placed in the injector and held fast by the clip (C).

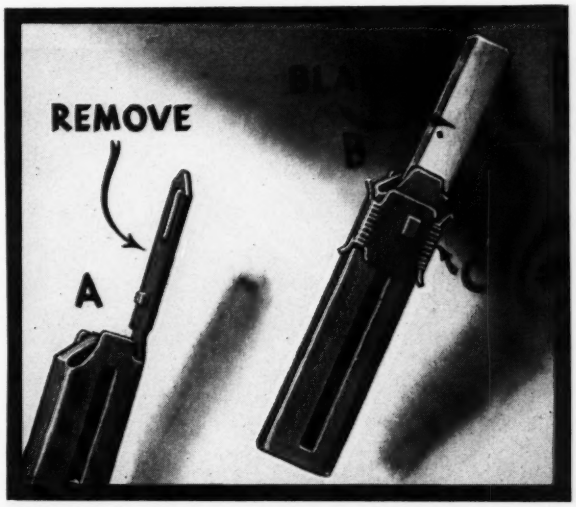


Fig. 5

An Amalgam Matrix for Concave Root Surfaces

Chester J. Henschel, D.D.S., New York

Fig. 6—It is often difficult to adapt a matrix to preserve the proper gingival form (A) in extensive caries into the gingival area of posterior teeth. The cervical cavity margin is shown in (B), and the line of adaptation of an ordinary matrix in (C). To insure proper fit at the concave surface (E), a piece of baseplate gutta-percha (F) is adapted to force the matrix against the cervical margin of the preparation. The matrix is then pressed outward against the adjacent tooth (D) to restore the contact. When the matrix is ready for the amalgam it should appear at the gingival as (G) and at the occlusal margin as (H). Caution: Be sure that the gutta-percha (I) is removed before dismissing the patient.

(*Continued on page* 378)

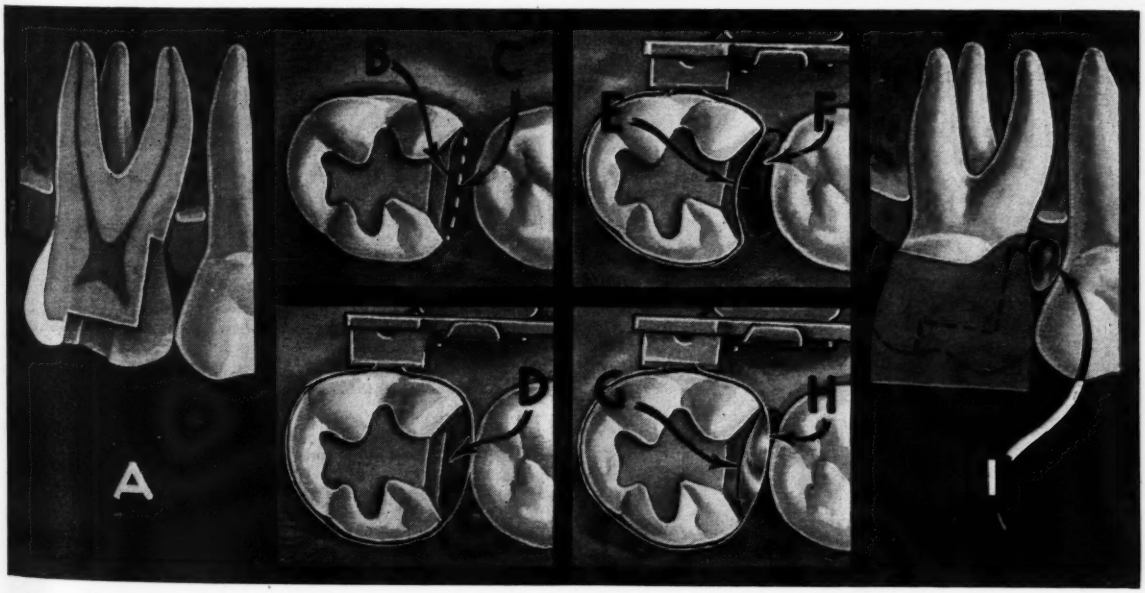


Fig. 6

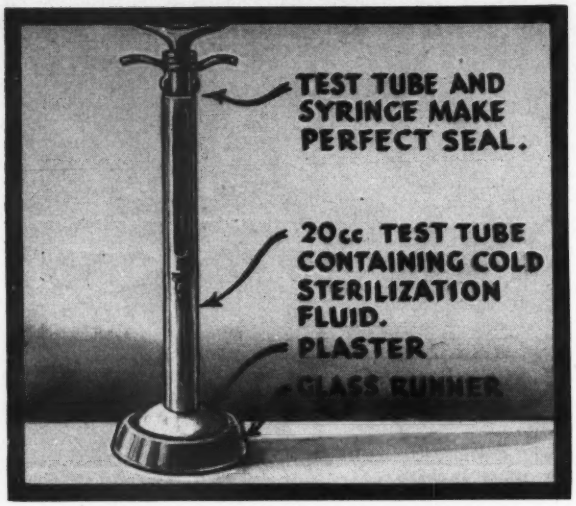


Fig. 7

An Economic Syringe Holder

Lieutenant Robert R. Goodhart (DC) AUS, Fort Oglethorpe

Fig. 7—A 20 cubic centimeter test tube is held firmly in place in a glass furniture runner with ordinary plaster of paris. The holder thus created will support the test tube in a vertical position without danger of its tipping over. Any cold sterilizing fluid can be used in the tube, which holds the syringe until it is to be used.



Fig. 8

A Mandrel Used as a Matrix Band Holder

Lieutenant Jan F. King (DC) USNR, Geneva, New York

Fig. 8—A curved matrix band is constructed of the proper size and shape to fit the tooth, and the screw of the mandrel is inserted through the two holes in the ends of the band to hold it tightly in place around the tooth. It is necessary, of course, that the band be short enough so that it fits tightly around the tooth *before* the mandrel is screwed entirely shut. A matrix band such as this can be cut to any size desired.



Fig. 9

A Method of Removing Cement from Slabs and Spatulas

Arthur L. Roberts, D.D.S., Aurora, Illinois

Fig. 9—Dissolving cement from the glass slabs is preferable to removing it by severe mechanical friction. Make a solution of baking soda, 2 tablespoonfuls of soda to 2 quarts of water, in a glass dish measuring about 4 by 6 by 12 inches. Soak cement-coated slabs and spatulas in the baking soda solution for about fifteen minutes. The cement will then come off without scraping, thus preventing scratching of the slabs.

UGGESTIONS (*Continued from page 377*)

A Protective Case for Wax Patterns Before Investment

Lester W. Winter, M.A., New York

Fig. 10—A wax pattern should be protected carefully if it is inconvenient to invest it immediately. Cut an ordinary glass test tube (A) to about 4 inches in length. Smooth the lip of the cut tube by revolving it in a Bunsen flame, and fit a cork to the opening. Attach the sprue former of a completed inlay pattern to the inner surface of the cork with sticky wax (B). The pattern is then immersed in water of room temperature in the tube. A pattern which has been waxed on a die and is to be checked in the patient's mouth before casting can be protected in the same kind of container (C).

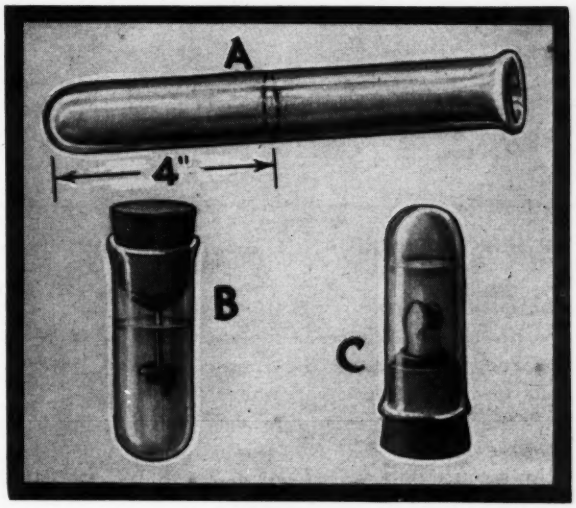


Fig. 10

An Economical Headrest Cover

Abraham H. Glick, D.D.S., Chillicothe, Ohio

Fig. 11—Select a set of bowl covers measuring 3 inches in diameter. These are large enough to slip easily over the dental chair headrest. Place a wad of absorbent cotton on the headrest, and slip a bowl cover over the cotton. This provides a comfortable headrest and one that can be washed readily with soap and warm water.

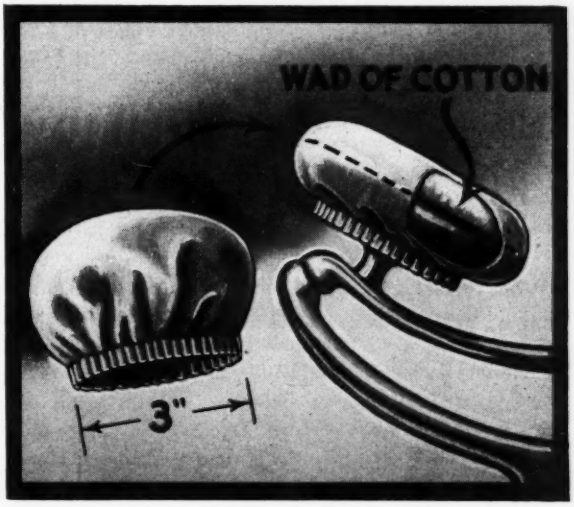


Fig. 11

A Hygienic Procedure for Fixed Bridges

I. Jacobs, D.D.S., Brooklyn

Fig. 12—Heat a 3-inch sewing needle and cut it in half. Flatten it on an anvil, and contour it to an arc shape. Disc the point until smooth. Thread dental floss through the eye of the needle. The floss can thus be drawn through interproximal spaces and under the pontics of fixed bridges to clean the spaces thoroughly.

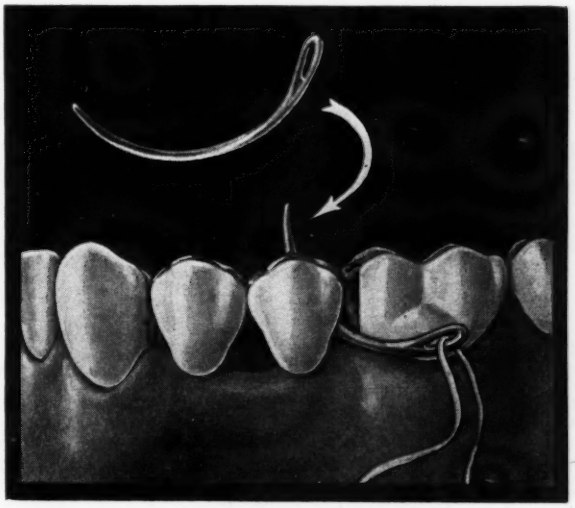


Fig. 12

Facial Prosthesis

ARTHUR H. BULBULIAN, D.D.S., Rochester, Minnesota

The various types of prostheses are discussed with reference to the requirements of the materials used in their construction, and the advantages and disadvantages of the different types of materials that have been and are being used in facial prosthesis are presented. A comparison is made of the results obtainable in using the two most recently developed materials for facial prosthesis: Prevulcanized liquid latex, a compound produced by rubber chemists in recent years, and flexible synthetic plastics which are called plasticized plastics.

THE INTEREST shown by the profession and the layman regarding facial reconstruction by the prosthetic method has been considerable during recent years. While some popular articles on this subject perhaps have been overenthusiastic in their description of results obtainable, such articles have nevertheless served the purpose of calling attention to the possibilities of this method of repair of facial deformities.

Those who are seriously engaged in this work realize that despite great advances made in the field, there are still many unsolved technical problems facing the facial prosthetist.

Requirements of Prostheses

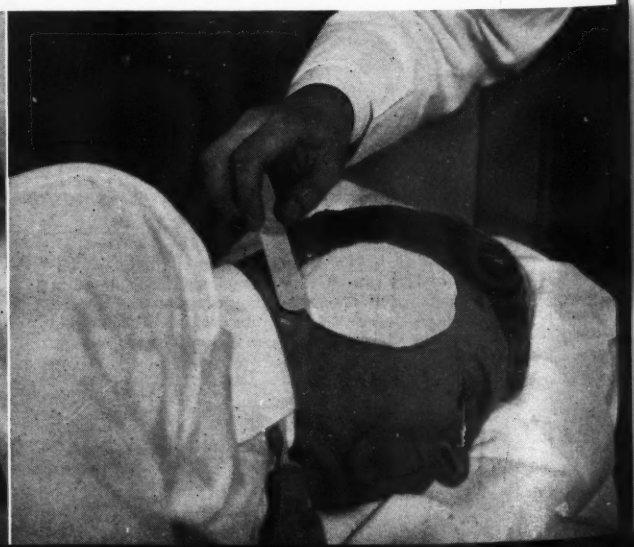
The key to the solution of the problem of a fully satisfactory prosthetic facial restoration lies in the finding of an ideal material, the detailed requirements of which are well known and need not be listed here. It should, however, be emphasized that the requirements of a material to be used in facial prosthesis are much more numerous and complex than the requirements of a material for use in other types of prosthesis about the body, a fact which has been one of the main stumbling blocks in the path of progress.

Let us examine various types of prostheses. In a prosthesis of the leg, for example, no parts of the device are visible while being worn; therefore, the problem of surface appearance, such as color, texture, and translucence, does not enter into consideration, nor does it become necessary that the line of juncture between the prosthesis and the body be made inconspicuous by the blending of the prosthetic material where it joins the tissues. The presence of a stump automatically solves the problem of retention. In a prosthesis of the eye, while color, translucence, and transparency are important, here too, the problems of concealing the line of juncture and retention of the prosthesis in position do not exist because of the favorable anatomic conditions present at the site of deformity. Similarly in the construction of dentures, while color, translucence, physical strength, stability, and retention are all important requirements which must be met, nevertheless the additional difficult problem of obtaining skinlike pliability and the necessity of hiding a line of juncture between the prosthesis and the tissue do not exist as they do in a facial[1] prosthetic restoration.

In a prosthetic restoration about the face the line of juncture in most

Fig. 1 (*left*)—*A small amount of cotton is packed into the opening of the external auditory canal before the application of the impression material. A protective layer of petrolatum may be applied over the hairy part.*
Fig. 2 (*right*)—*A quick-setting mix of plaster of paris has been applied evenly over the site of deformity. Note the extent of the area covered by the impression material.*











Top—Left: Traumatic loss of the right auricle. Right: Appearance of the patient with a prosthetic reconstruction.

Center—Left: Congenital absence of the right auricle. Right: Appearance of the patient wearing a prosthesis.

Bottom—Left: Traumatic loss of the right auricle. Right: Appearance of the patient wearing a prosthetic ear.





Fig. 3 (left)—The plaster of paris has reached the initial setting stage and is being removed carefully.
Fig. 4 (right)—The impression is examined carefully for imperfections and is compared with the deformity.

cases is out in the open and its concealment requires a great deal of attention to detail. Furthermore, a prosthetic restoration about the face is not protected from the fading effect of sunlight and other atmospheric conditions injurious to the prosthetic material, as is a type of prosthesis which is partly or wholly covered. In an intra-oral or intra-orbital prosthesis the surface of the material is protected by a coating of secretion of the mucous surface which comes in contact with the prosthesis, keeping it free from dirt and dust.

Types of Prosthetic Materials

Early prosthetic restorations were made out of rigid materials (vulcanite, metals, and others) which, while lacking in pliability and translucence, were nevertheless usable in certain instances. They were used chiefly because prostheses made from such rigid materials were at least stable and stood up well under long usage, even though they lacked lifelike appearance.

The first important departure from the rigid types of facial prosthetic restorations took place when a material consisting of a gelatin-glycerin mixture was introduced during the first World War. These gelatin-glycerin restorations, perishable as they were (a week was the maximal life for such a restoration), aroused new hope and enthusiasm, inasmuch as here was a material by means of which not only the color of the skin but also its texture and translucence could be fairly satisfactorily reproduced. The grave disadvantage of perishability was partly counterbalanced by giving the patient the original mold and instructing him to make his own duplicates as needed.

The use of properly cured rubber compounds of low sulfur content, similar to velum rubber, of fairly good color and translucence and having the pliability of gelatin-glycerin mixture, could no doubt have been applied in facial prosthesis but it appears that this method was not used extensively. The reason for this may have been the difficulties of compounding such rubber in the various shades and translucence required for each individual case. However, with the introduction of prevulcanized liquid latex, a remarkable compound which the rubber chemists have produced in recent years, many of the difficulties of compounding and molding were eliminated. Prevulcanized latex is at present one of the few

[1]In this discussion, by facial restoration is meant a restoration of parts of the facial features which are totally exposed, such as the ear, the nose, the cheek, and the chin. Reconstruction of the eye, like the reconstruction of the denture, comes under a different category. The latter is an intra-oral prosthesis and the former is an intra-orbital prosthesis, only a part of which is exposed.

Fig. 5 (left)—The periphery of the impression has been trimmed, separating medium has been applied to the surface, and the impression has been boxed.
Fig. 6 (right)—Dental stone is poured into the impression.

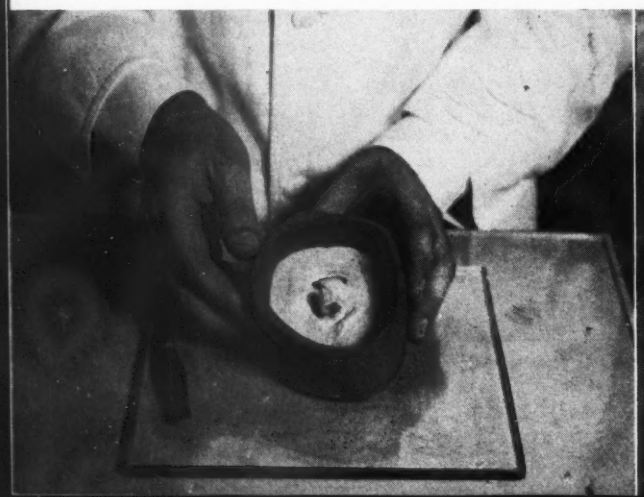








Fig. 7 (left)—The first step in separating the impression from the cast. Small segments of impression material which remain on the cast are dug out with a blunt instrument.
Fig. 8 (right)—The area which will be in contact with the wax pattern of the proposed prosthetic ear is marked on the cast.

elastic materials which can be used in facial reconstruction with fairly good results.

With the introduction of a wide variety of synthetic plastics, particularly certain varieties of elastic plastics, an even more promising field has been opened for the facial prosthetist. Just as methylmethacrylate, one type of rigid synthetic plastic, after a period of experimentation and extensive clinical trials, has replaced vulcanite as a material for bases for dentures, it appears that a flexible type of synthetic plastic of some variety with desirable properties will in time entirely replace prevulcanized liquid latex. The latter, however, in certain types of applications, for reasons to be enumerated later, is still the material of choice.

A summary of the chief advantages and disadvantages of these two materials, prevulcanized latex and elastic plastics, in their present available form, may be helpful at this point.

Advantages of Prevulcanized Latex

Ease of Molding—Prevulcanized liquid latex in its fresh state is a white, creamy liquid so prepared that all that is needed to convert it into a tough elastic rubber is to allow it to dry, either at room temperature or in an oven between 50° C. and 100° C., depending on the type of mold used. This drying of the liquid prevulcanized latex can take place in a closed plaster of paris mold, inasmuch as the pores of the latter facilitate the evaporation of water.

Excellent Pliability and Stretch—The elongation of thoroughly cured prevulcanized latex is several hundred per cent. This is a distinct advantage in positions such as the region of the nose and the ear where movement of contiguous tissues would have a tendency to dislodge a less pliable prosthesis.

Adaptability for Hollow Casting—Prevulcanized latex has the distinct advantage of being moldable in hollow form in some cases. This is accomplished by emptying the contents of the mold before all the latex in it has congealed. By this method a layer of latex of any desired thickness may be deposited all over the inner surface of the mold. Such an operation makes it possible to construct hollow and lightweight restorations, a highly important feature in the successful retention of a prosthesis.

Ease of Duplication—It is possible to reproduce many duplicates from

Fig. 9 (left)—Method of waxing up the pattern of the proposed ear over the cast.
Fig. 10 (right)—Method of dividing the wax pattern into two regions preparatory to making the second part of the sectional mold.

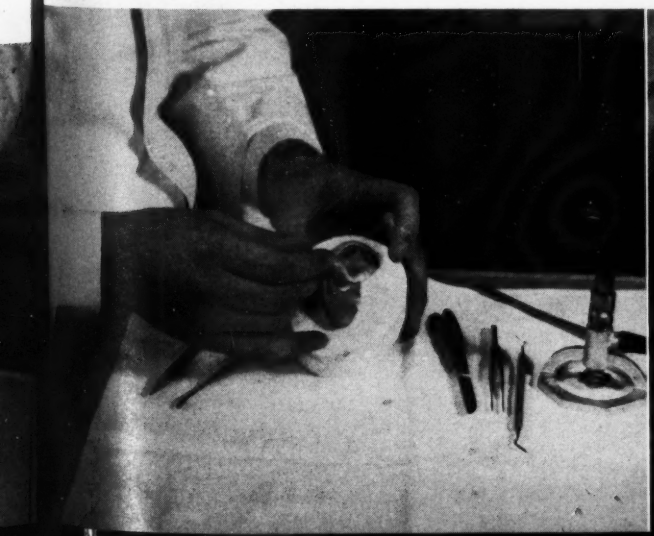








Fig. 11 (*left*)—*The wax pattern has been softened and is ready to be removed from the three-piece mold.*
Fig. 12 (*right*)—*A prevulcanized latex cast of a prosthetic ear being removed from the mold.*

a properly designed plaster of paris mold, inasmuch as such a mold is not destroyed in separating the latex prosthesis from the mold.

Disadvantages of Prevulcanized Latex

Shrinkage—One of the main disadvantages of prevulcanized latex is the unpreventable shrinkage which takes place while the material is being cured in the plaster of paris mold. This shrinkage is often as high as 10 per cent,[2] which, in certain conditions in which accurate fit is essential, is a serious disadvantage. In constructing a prosthetic ear the wax pattern could be made proportionately large in its over-all dimensions in anticipation of the shrinkage, but to allow for shrinkage along such irregular areas which fit against the site of deformity is not always practicable.

Deterioration Caused by Fatty Secretions of Skin—After a restoration made from prevulcanized latex[3] has been in contact with the skin over a period of several weeks, it has a tendency to absorb part of the oily secretion, resulting in the deterioration of the cured latex. Within a few days after the restoration has been on the face, the effect of this deterioration is particularly noticeable along the thin feather edges of the restoration forming the lines of juncture.

Incompatibility with Liquid Adhesives—Some of the best liquid adhesives used in facial prosthesis (mastisol and others) are not compatible with prevulcanized latex, inasmuch as the solvents in these liquid adhesives are injurious to the natural latex restorations.

Lack of Good Translucence and Color—The translucence of most carefully compounded prevulcanized latex seems to fall short of what is required for lifelike reconstruction.

Advantages of Plasticized Plastics

Excellent Color Possibilities—Plasticized or resilient types of plastics are superior to latex in color and translucence; therefore, they produce more lifelike restorations than any other material so far made available. Two restorations, one made in prevulcanized latex and one in plasticized plastic, using the same mold and identical pigments and opacifying agents, placed side by side show marked difference in favor of the plasticized plastic.

Negligible Shrinkage—The shrinkage of most synthetic plastic materials within the mold is negligible, so that, unlike prevulcanized latex, satisfactory dimensional reproduction of the wax pattern is assured.

Compatibility with Fatty Secretions of the Skin and Liquid Adhesive—Synthetic plastics do not have the disadvantage of deteriorating to the same degree as natural latex does when in contact with oily secretions of the skin. Furthermore, a liquid adhesive which appears to be injurious to prevulcanized latex does not have the same injurious effect on synthetic plastic of a pliable variety.

Disadvantages of Plasticized Plastics

Difficulty of Reduplication—When flasked molds of the plaster of paris type are used in making pliable plastic prostheses, the mold can be used but once for a given prosthesis; consequently, a new mold is required for making a duplicate. This is a disadvantage in cases in which several duplicates may be needed.[4]

Poor Adhesion—It appears that the plasticizing agents used in plasticized plastics inhibit the adhesive quality of most liquid adhesives that are available for this purpose, so that unless the anatomic configuration of the restoration is ideal from the standpoint of retention, liquid adhesives that have so far been made available cannot be relied on entirely.

Lack of Ready Adaptability for Hollow Casting—Unlike prevulcanized latex, restorations made in plasticized plastic cannot be molded hollow without the use of complicated cores.

From the foregoing statements, it becomes obvious that a choice between the two materials will depend

[2]Porous latex restorations with reduced shrinkage are possible to construct but the technique is complicated.

[3]The natural variety, obtained from *Hevea brasiliensis* or similar latex-producing plants.

[4]This difficulty could be overcome by the use of permanent sectional metallic molds, for which most dental laboratories are not equipped, or by making the new mold using the first casting as a pattern.

on many factors. Undoubtedly anyone who has worked with these materials will find one type more suitable than the other for a certain restoration. Improvement in the properties of the various materials, and particularly those of the plasticized type of synthetic plastics, should eventually result in finding "the" ideal material.[5]

General Outline of Technique

The technique of a prosthetic facial reconstruction, regardless of the final material used in facial prosthesis, consists of four main steps: (1) Making a cast of the deformity from an accurate impression; (2) building up of a wax pattern of the proposed prosthesis over the cast; (3) making a proper mold of the wax pattern of the prosthesis; and (4) processing the prosthesis in the material that has been chosen.

As a rule the first two steps, making the cast and making the wax model, are the same for making a prosthesis in any type of material. The variations in the technique are introduced in the last two steps to meet the requirements of the technique of processing or curing the particular material which has been selected.

Making Cast of Site of Deformity—This step consists of taking an accurate impression of the deformity and making a suitable cast from it. Figures 1, 2, 3, and 4 illustrate the steps of obtaining an impression of the site of deformity with the use of dental plaster of paris in making a prosthetic ear. Hydrocolloid impression material may be used if the condition requires it.

1. The opening of the external auditory canal is plugged with a small amount of cotton, and quick-setting dental plaster of paris is applied over an area around the opening. The impression should include at least 1 inch (2.5 cm.) all around beyond the margins of the proposed prosthetic ear.

2. After the impression material has set properly, it is removed carefully and examined for imperfections.

3. The impression is trimmed carefully along the periphery and a separating medium is applied to the surface.

4. A suitable dam is placed around the periphery (Fig. 5) of the impression, and dental stone of some variety is poured (Fig. 6).

5. The impression is separated from the cast by prying with a knife (Fig. 7). Small parts of the impression which remain in the cast are dug out with a blunt instrument. The cast is now ready for the application of the wax model.

Building up Wax Pattern of the Prosthesis—An expeditious method of building a wax pattern of the ear consists of obtaining a cast of a normal ear of correct size and shape from another subject and fitting it over the cast by reshaping and remodeling it (Figs. 8 and 9). Following the adaptation of the wax pattern over the cast, the wax pattern is removed from the cast and tried on the patient's face to see that it is alined properly and fits on the actual deformity in the same way as it does on the cast. The wax pattern is now ready for processing.

Making the Prosthesis Mold—if the restoration is to be made in latex, a permanent mold is desirable in order to be able to make duplicates. For this a three-piece mold rather than a two-piece mold is most suitable. The original cast will constitute one of the three pieces. Two more pieces remain to be made. This is done by dividing the wax pattern along the border of the helix, toward the back, with a clay strip (Fig. 10). The top half of the mold is made by applying dental stone over this region. After this part of the mold has hardened, the clay strip which separated the front of the ear from its back is removed; a suitable separating medium is applied to the plaster cast along surfaces where the third section will come in contact with the surface of the first and second sections; and hard dental stone is poured into the remaining space divided by the clay strip.

Following the completion of the three-piece mold, the wax pattern is removed from the mold (Fig. 11). Removal of the wax pattern must be done with great care so as not to melt the wax into the pores of the plaster of paris. The wax must be heated just enough to soften it, making it easy to extract it from the mold cavity without injuring the mold. There are two ways of accomplishing this: (1) Keep the mold in warm water at around 45° C. for about half an hour, or (2) immerse the mold in cold water and bring it to a boil, then remove immediately. Thickness of the mold and the wax pattern is a factor which must be taken into consideration here.

If a plasticized or elastic type of plastic is to be used, the cast is flasked in the lower half of the flask with the wax pattern in position, a separating medium is applied to the exposed surface of the cast, the top half of the flask is placed in position, and the wax pattern is flasked in the usual manner. When the two halves of the flask are separated, the lower half will contain the cast and the upper half the wax pattern, which in this case, and unlike a mold for a latex restoration, can be removed by the usual "boiling out" technique.

Processing the Prosthesis—For making a latex restoration by the use of the three-piece mold described previously, an opening about 3/8 inch (1 cm.) in diameter is made on the lower section (the original cast) of the mold. The outer end of this opening is widened to make a funnel-shaped pour hole. The properly filled

[5]Two new materials of elastic plastic type which have been introduced recently for use in prosthetic facial reconstruction are worthy of serious consideration by those engaged in facial prosthetic reconstruction. Dicor A is a development of Vernon-Benshoff Company of Pittsburgh, and Skin-tex is a development of H. D. Justi and Son, Inc., of Philadelphia.

[6]I use Vultex formulation number 235, obtained from the General Latex and Chemical Corporation, 666 Main Street, Cambridge 39, Massachusetts. To this prevulcanized latex, zinc oxide, about 1 per cent by weight, must be added as an opacifying agent to impart proper translucence. Latex restorations are colored best intrinsically. For this, water-soluble dyes or even fine pigments in suspension can be used. The solution (or suspension) of known concentration must be added in units of drops to a measured quantity of filled latex just before pouring it into the mold. I have experimented with many dyes and pigments in various combinations with almost equal success. One type of prepared dye which produces a good skin color is sold under the name of Latex Pink F.F.D. by Akron Chemical Company, 1025 Swietzer Avenue, Akron, Ohio. Two or three drops of a 5 per cent concentration of this dye will be sufficient to impart correct color to an average prosthesis requiring 30 cc. to 40 cc. of latex. A little experimentation will be necessary in order to arrive at the right combination for any given case.

and colored prevulcanized latex compound[6] is poured into the mold through this opening. An excess of latex must fill the funnel so as to insure complete filling of the mold. Curing is accomplished in a drying oven regulated to 70° C. for about twenty-four hours. The cured restoration can then be removed from the mold and trimmed (Fig. 12). For a hollow restoration, which is possible in certain cases in which there are excessively thick cross-sectional areas, the latex should be drained out of the mold at the end of about thirty minutes, and the latex which remains in the mold cured for twelve hours at 70° C.

For processing of the prosthesis in one of the pliable synthetic plastics using the flask method, the method recommended by the dealer supplying the particular material is to be used.

Mayo Clinic.

Penicillin Packs in the Treatment of Vincent's Infection

SURGEON LT. COMDR. (D) R. THEXTON, AND SURGEON LT. (D) P. K. DICK

ALMOST all present day treatments of Vincent's infection have two great disadvantages: (1) The destruction of tissue from the use of strong caustics and escharotics, and (2) the tedious application of solutions of drugs over a long period. It is improbable that any existing methods of treatment prior to the introduction of penicillin could restore the oral tissues to "normality" in under ten to fourteen days. Penicillin is, in the dosage used, entirely nontoxic to the living cells, and thus damage to gingival tissue is restricted to that caused by ulceration prior to the institution of penicillin therapy. The rapidity of action of penicillin is extremely high compared with that of any other drug.

The following pack method of penicillin treatment of Vincent's infection may be a useful alternative treatment if facilities for dispensing the pastilles are not available. The method is not tedious or time consuming, and the results so far obtained have been excellent.

The Pack

The pack devised consists of: (1) The powder, penicillin in a light magnesium base; (2) the liquid, pure olive oil; and (3) cotton-wool.

Zinc oxide and eugenol is not suitable as a vehicle for penicillin, which is rapidly inactivated by antiseptics. Magnesium oxide has the advantage of bulk, and acts as a diluent for the large number of units of penicillin contained in a small amount of penicillin powder or tablet.

Penicillin sodium powder, 100,000 units, is triturated in a sterile mortar, slowly adding 2 grams of light magnesium oxide. This is mixed well for ten minutes to ensure even distribution of the penicillin. This amount of mix is sufficient for approximately forty treatments.

Mixing

The mouth is examined and the number and sizes of the packs are estimated. One or two drops of pure olive oil are placed on a clean mixing block. Enough "stock powder" is then added to make a paste of the consistency of soft butter. Small wisps of cotton-wool are then incorporated to produce packs of the requisite size. A special slab and spatula should be reserved for this work in order that contamination by antiseptics does not occur. Quite a large number of packs can be obtained from a small mix of the paste.

Application

It is important that the packs be tamped down firmly in order that dislodgment does not occur. Dry pledgets of cotton-wool are suitable for this. No hard and fast rule can be made as to where the packs should be inserted. We found that if they are placed in the region of the most severe ulceration it is unnecessary to pack milder lesions; however, at the first visit it is better to pack as many interspaces as possible as a precautionary measure. The number can be reduced on each succeeding day. In patients exhibiting ulcers of the cheek we packed the interspaces nearest to the lesions and obtained good results.

The pack does not set hard and acts as a reservoir, slowly liberating the penicillin into the mouth. It was observed that lesions remote from the packed areas were resolving. Thus the number of packs used is cut down to a minimum consistent with the severity of the disease.

Ancillary Treatment

No other form of treatment is used

(*Continued on page* 410)

We Can't Pay You, But—

NO DENTAL author can ever be *paid* for a valuable technical or scientific article. The value of such material is above a monetary basis. In the preparation of a technical article, however, an author often expends money for drawings, photographs, models, or graphs. We should like to help defray some of these expenses.

Until further notice, THE DENTAL DIGEST *will allow* $25.00 *toward the cost of the illustrations provided by the author of every article accepted.*

If you have a constructive idea, an innovation, a new result of tried and proved experiment, put it down in writing, illustrate it, and send the material to: The Editor of THE DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

We hope that you will accept this invitation!

The Editor's Page

FATIGUE IS A price that the organism pays for activity. Natural tiredness follows the expenditure of energy. With physical rest the "battery" should be recharged, and the organism should return to a state of equilibrium. When fatigue and weakness persist after rest, it is a sign that something is wrong within the organism. Dentists, in common with others, have suffered under the stresses of the war, worry, and overwork. The fatigue state produced may predispose to a serious disease.

The tiredness that follows physical activity is usually a pleasant sensation. The exhaustion that follows nervous stress is depressing. We have all experienced these states ourselves and have observed them in our patients. To protect ourselves against needless fatigue and to be sympathetic and understanding with our patients, we should know more about the fatigue state.

Allan[1] of the Lahey Clinic, in an examination of three hundred persons who complained of weakness, fatigue, and weak spells, found that nervous conditions were responsible in 80 per cent of the cases. Physical disorders, which comprised the other 20 per cent, included chronic infections, diabetes, heart disease, anemia, and nephritis. Vitamin deficiencies and endocrine disorders, which are commonly ascribed as causes of weakness, were found to be rare in Allan's study (0.3 and 1.3 per cent respectively). To differentiate the nervous fatigue states from physical fatigue, Allan lists eight features usually present in nervous fatigue:

1. Weakness, greater in the morning, and wearing off during the day.
2. Variability in tiredness from day to day without a change in activity to account for it.
3. Immediate benefit from the use of slow-acting medication such as thyroid, vitamins, liver extract, iron, and digitalis.
4. Immediate relapse on omission of customary treatment with these drugs.
5. Life-long ill health.
6. Complaints of more than three years' duration without any physical disorder to account for them.
7. Symptoms obviously nervous in origin, such as a lump in the throat and difficulty in getting a satisfactory breath.
8. Nervous behavior such as flushing and weeping.

This recitation of features is familiar to all of us. We have had a countless number of patients consult us for the evaluation of possible dental infection, chief among their complaints being profound exhaustion and fatigue. Before we are too quick to indicate tooth removal and other forms of dental treatment it would be well for us to consider the possibilities that the patient's difficulties are neurogenic or psychogenic in origin rather than physical. The more we know the patient as a person, the more successfully we can treat his disease.

Allan would not have every patient with simple "benign nervousness" sent to a psychiatrist. Quite the contrary. He believes that in the simple states of nervous fatigue the general practitioner can do more by reassurance and encouragement than can the psychiatrist who is usually trained to look for the more serious conditions.

Every dentist and every physician who believes and practices "personal" medicine would do well to keep before him this sensible suggestion by Allan: "Some patients need a friendly shoulder on which to weep, a sympathetic ear to receive a recital of worries and fears; some people are like a clock which requires winding every so often. Any physician who is sincerely interested may provide this help. Nervous people deserve interest and not scorn. As patients they may be tiring, but they often possess charm and talent and form a valuable element in society."

Two eminent physicians discussed Allan's paper, Alvarez of the Mayo Clinic and Freeman of Saint Elizabeth's Hospital in Washington. Alvarez believes that many of these tired people are constitutionally frail and inadequate to stand up under the strains of life. They are biologically inferior. Freeman, on the other hand, stresses the importance of proper physical activity: "When their muscles are working, their brains are resting."

[1]Allan, F. N.: The Clinical Management of Weakness and Fatigue, J.A.M.A., 127:957-960 (April 14) 1945.

External Pin Fixation: Roger Anderson Method

Lieutenant GLENN E. THISTLETHWAITE (DC) USNR, F.P.O., San Francisco*

The advantages of the use of Roger Anderson external pin fixation in treating mandibular fractures are listed, and the method of placing the appliance is described. Three case illustrations of the use of the appliance in mandibular fractures are reported.

THE ORAL surgeon frequently must treat mandibular fractures which cannot be handled adequately by ordinary methods of reduction and immobilization. Such cases include those in which the maxilla or mandible are edentulous, and those in which the mandible is partly edentulous with the line of fracture through the edentulous part. In treating these patients, it is frequently advantageous to employ some method of skeletal fixation. One such method, which has proved successful in our hands, utilizes the Roger Anderson appliance, and is surprisingly simple in its application to difficult mandibular fractures.

Advantages of Method

The results obtained through the use of this appliance at the Cook County Hospital in Chicago during the last two years have been extremely gratifying.

1. The incidence of infection, which formerly ran high in this type of fracture, was reduced to a minimum. This we attributed to a more adequate immobilization of the fracture with the Roger Anderson appliance and to the added facility with which the patient can keep his mouth clean.

2. The length of time required for osseous union of the fracture was reduced considerably. This is attributed not only to the reduction of infection, which has been regarded as a retarding factor in healing time, but also to the ability of the patient to utilize his mandible within a day or two following the application of the Roger Anderson appliance.



Fig. 1—Ideal placement of Roger Anderson pins in a unilateral fracture of the body of the right mandible through the mental foramen.

3. Necrosis of bone about the pins occurred only in rare instances. In most of the cases treated, the pins were found to be as solidly implanted in the bone when they were removed as when they were placed originally.

Technique

1. The patient has medication of morphine and atropine twenty minutes prior to the operation.

2. Local anesthesia is used in most cases. A block of the third division of the trigeminal nerve on both sides, supplemented by external infiltration through the skin and into the periosteum at the sites chosen for place-



Fig. 2—Pins should not be placed too close to the line of fracture because of the danger of contamination from the mouth.

*The opinions or assertions contained herein are the private ones of the writer and are not to be construed as official or reflecting the views of the Navy Department or the Naval Service at large.

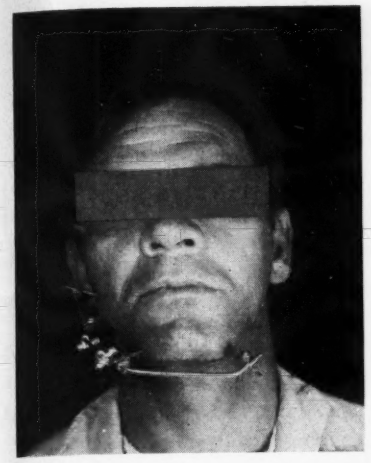


Fig. 3—Roger Anderson appliance in place for a unilateral fracture through the angle of the mandible.

ment of the pins, will suffice to eliminate pain or discomfort.

3. Two pins should be placed in each fragment. Thus a unilateral fracture requires four pins and a bilateral fracture requires six pins.

a) The pins should be spaced as wide apart as possible, and should be placed close to the lower border of the mandible.

b) Figure 1 shows ideal placement of the pins in a unilateral fracture of the body of the right mandible through the region of the mental foramen. Notice that the pins adjacent to the line of fracture are placed about 2 centimeters away from the fracture, and that the two pins farthest from the fracture are widely spaced from the first two pins. This positioning of the pins gives greater stability and decreases the stress put on any one pin.

c) Each pin should be inserted into the bone at an angle of 60 degrees to the surface of the mandible in such a manner that the two pins in each fragment diverge from each other. Placing the pins at this angle affords a greater thickness of bone for each pin to engage and thus increases the stability.

4. In placing the pins, first a stab incision is made with a number 11 Bard-Parker blade.

a) A pin with a sharp tribeveled point and screw thread is used; this enables the operator to screw the pin into the bone manually with slight pressure.

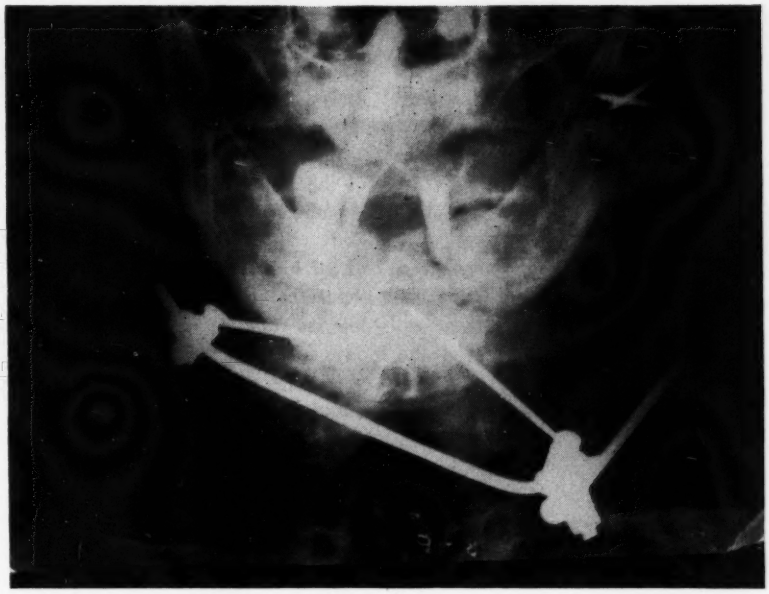


Fig. 4—Roger Anderson appliance in place for fractures through the body of the left mandible and the right condyle.

b) Ideally the pin should pass through the outer cortical plate and medullary bone until it engages the inner cortical plate.

c) Care should be taken that the pins adjacent to the fracture are not too close to the line of fracture because of the danger of contamination from the mouth, especially if the fracture is badly comminuted or compounded (Fig. 2).

5. When the pins are in position, the two pins in each fragment are connected with a rigid stainless steel bar.

6. The fracture is then reduced as well as possible by manual manipulation of the fragments.



Fig. 5—Roger Anderson appliance as a supplement to intra-oral fixation in fractures through the body of the left mandible and the right condyle.

7. When the fracture is in good position it is held so by the surgeon while an assistant adjusts another rigid bar or bars between the connecting bars attached to the pins in each fragment. These bars are locked in position by means of specially fitted attachments which are supplied with the kit.

8. The reduction should be checked by roentgenographic examination and altered or improved, if necessary, by further adjustment of the appliance.

Case Illustrations

Case I—Figure 3 shows the use of the Roger Anderson appliance in a unilateral fracture through the angle of the mandible. The patient did not seek treatment until the fracture was three weeks old. Inasmuch as there was but little displacement, reduction of the fracture was not necessary. Immobilization with the appliance served to bring about osseous union in five weeks.

Case II—Figure 4 shows the use of the Roger Anderson appliance in a patient with fractures through the body of the mandible in the region of the lower left cuspid and through the right condyle. The tooth in the line of fracture was extracted three days following the application of the pins. The patient was placed on a liquid diet and cautioned against excessive movement of the mandible. With this simple treatment he had good union of both fractures in six weeks.

Case III—Figure 5 shows application of the Roger Anderson pins as a supplement to intra-oral fixation to control an edentulous posterior fragment. This patient had fractures through the body of the left mandible near the angle and through the right condyle. The intermaxillary wires were removed after four weeks and the external appliance was removed two weeks later. The results were excellent.

Comments

In all patients in whom we have used this method of skeletal fixation there has been a minimum of scarring. Infection around the pins can be prevented by using small sterile dressings. These can be removed and changed frequently, and any crusting around the pins can be controlled by using a peroxide solution. Following removal of the appliance, small pin-point scars will remain.

A Helmet of Acrylic for Protection Against Craniocerebral Injuries

LOYAL DAVIS, M.D.

A NEW HELMET, fashioned like football headgear but molded to the skull and made of acrylic resin, has been designed to minimize craniocerebral injuries among airmen. The general issue infantry helmet was found unsatisfactory for airmen because of its size, shape, and weight. The new helmet permits complete movement of the head in all directions, provides complete protection over the frontal and occipital areas, and does not interfere with the field of vision. With the regular leather helmet over it, the entire outfit weighs only 27 ounces.

Properties of Acrylic Resin

The acrylic resin used in these helmets has the following qualities:

1. A tensile strength of from 9,000 to 12,000 pounds per square inch.
2. A flexural strength of 12,000 to 14,000 pounds per square inch.
3. An impact resistance of 0.1 to 0.3 foot pounds.
4. A Brinnell hardness greater than gold.
5. A specific gravity of 1.10, so that it almost floats on water.
6. It will absorb less than 0.5 per cent of water by weight upon immersion for seven days.
7. It is resistant to the rays of the sun, and will not soften until a temperature of between 190° F. and 240° F. has been reached.
8. It is one of the best nonconductors of heat and cold known to science.
9. It smolders if a flame is applied to it, but will not burn with an explosion. If it flames, the slightest movement extinguishes it.
10. When hit directly, the lines of shattering of this material are at right angles to the force and not directly forward as in steel.
11. It is inert and causes no serious tissue reaction if pieces of it are driven into or buried in the brain or soft tissues.
12. The acrylic resin used in a working model was of 4 millimeter thickness. It had a velocity resistance, in relation of its weight per unit area, of 440 meters per second when tested with a 52-milligram steel ball fired and photographed electrically.

—From Abstracts from Current Literature, *Hospital Corps Quarterly*, 17:128 (September) 1944.



Anyone who has observed the damage to teeth and gums caused by improper use of the tooth brush will agree that *brushing incorrectly may be worse than not brushing at all.*

That is why so many dentists recommend the D. D. Tooth Brush to their patients. For the D. D. Tooth Brush makes scientific brushing *easy.*

The ingenious *twisted-handle* of the D. D. Tooth Brush facilitates proper placement of the brush on the teeth . . . almost automatically insures desirable *rotary motion.* Leading periodontists acclaim the *non-skid thumb rest* which permits easy control of the compact brushhead for gentle gum massage.

A product of
BRISTOL-MYERS COMPANY

D.D.
DOUBLE DUTY
TOOTH BRUSH

Dept. 2
630 FIFTH AVENUE
NEW YORK 20, N. Y.





Here's the secret OF COOL LIGHT IN THE *Castle* "T-V"

The famous *quality* of light, built into every Castle "Tru-Vision," is produced by the special glass filter completely enclosing the bulb. Engineered exclusively for Castle Lights, this filter absorbs and dissipates the infra-red (heat) rays and the excess reddish and yellowish light rays. The resulting light is cool and color-corrected . . . almost like bright daylight.

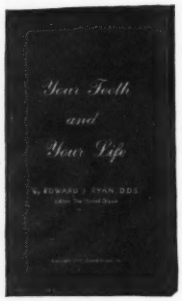
For further details of the Castle "Tru-Vision" Light, the *quality* illumination for modern precision dentistry, write: WILMOT CASTLE CO., 1123 University Ave., Rochester 7, N. Y.

Castle LIGHTS AND STERILIZERS

ETHICAL PATIENT EDUCATION MATERIAL

Dentists everywhere are using this pamphlet in their patient education programs. Here are five of the ways it can be used: (1) As a monthly statement enclosure; (2) Reception room use; (3) Patient distribution upon dismissal; (4) Enclosure with patient recall cards; (5) Dental Societies and Parent-Teacher Association groups.

200,000 copies sold to date. Prices are low—25 for $1.00; 100 for $3.00. Use the coupon.



The Dental Digest
1005 Liberty Ave., Pittsburgh 22, Pa.

Here are $..... covering ..... copies of YOUR TEETH AND YOUR LIFE.

Dr. .....

Address .....

City .....

Contra-Angles

A Hand to Mr. Kelly . . .

The mayor of Chicago, Mr. Edward J. Kelly, is a long time friend of dentistry. It is a pleasure to give public credit to Mr. Kelly, who often is reviled as a political boss. On every occasion when Mr. Kelly has been approached by representatives of dental societies, he has responded promptly, directly, and with inestimable help. In 1935 it was through Mr. Kelly's efforts that the dental program for the recipients of unemployment relief was modified to give more control and recognition to the dental profession and to assure a better service to the public. This year Mr. Kelly has shown his social vision by being a strong champion of the anti-advertising dental law passed by the Illinois State Legislature.

In company with Dean Freeman of Northwestern, Dean McNulty of Loyola, former Dean Noyes of Illinois, and Edgar Swanson, I recently appeared before Mr. Kelly to ask his support for a dental hygienists' bill for the State of Illinois. Although the field of the dental hygienist was relatively unknown to Mr. Kelly, he was quick to see the possibilities and the public health significance of the dental hygienist. He saw what many dentists have not seen: That only through well trained and well paid dental hygienists will it be possible to inaugurate public health programs of any significance that will be helpful to children. He also recognized the dental hygienists' field as an important one to women returning from military service. From the point of view of the representatives of the dental profession, Mr. Kelly is a person of intelligence, quick and honest decisions.

One has an opportunity to learn

more about people at first hand than he has from reading political columns in newspapers that are often modified by self-interest. It would be a good thing for all of us to remember to judge people by the way we find them rather than by what somebody else says about them.

High Pressure Neurotics . . .

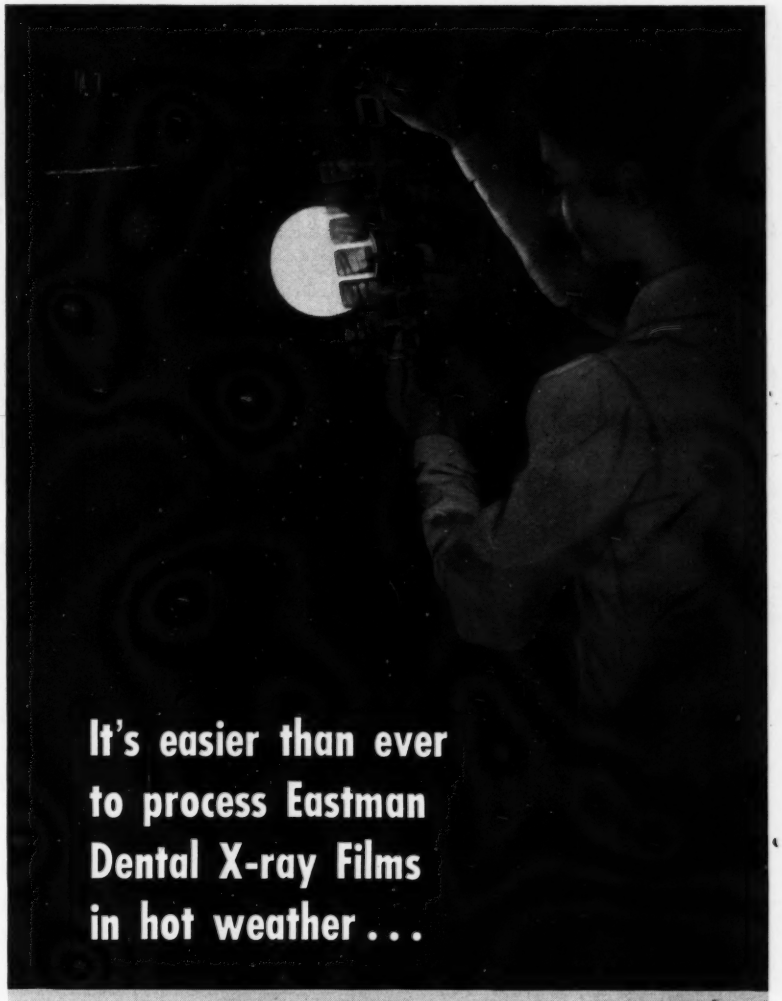
I have always looked for some scholarly explanation for the desk-pounding, shouting, vituperative executive. I have suspected that the man of dominating personality and great energy may be activated by some quirk in his personality. I am glad to find a writer in *The Saturday Review of Literature*, Mr. Lawrence K. Frank, who gives an explanation for some of the tiresome, noisy, overactive, ruthless people I have known. Here is what Mr. Frank says:[1]

"We are beginning to recognize that the individual who ruthlessly strives for power, prestige, and property and utilizes our legally sanctioned patterns of competitive rivalry for these strivings is usually an unconscious victim of his own personality make-up and 'forgotten childhood.' Thus, he is driven to sacrifice not only others but himself for achievement of his ambitions, as he attempts to 'show them' or 'get even,' or releases his otherwise intolerable feelings in his interpersonal relations or various psychosomatic disorders. (See Karen Horney, THE NEUROTIC PERSONALITY OF OUR TIMES, and Henry B. Richardson, PATIENTS HAVE FAMILIES).

"So long as individuals are so driven, coerced, or self-defeated by their own personality, they have no freedom, however freely they may appear to be living, conducting their business, or carrying on their professional activities. Nor can such unhappy, internally conflicted individuals participate in creating and maintaining a social order dedicated to human needs and values because of their distorted personalities. We are just beginning to recognize that an

(*Continued on page* 401)

[1]Frank, L. K.: The Rising Stock of Doctor Hayek, The Saturday Review of Literature, **28**:5 (May 12) 1945.



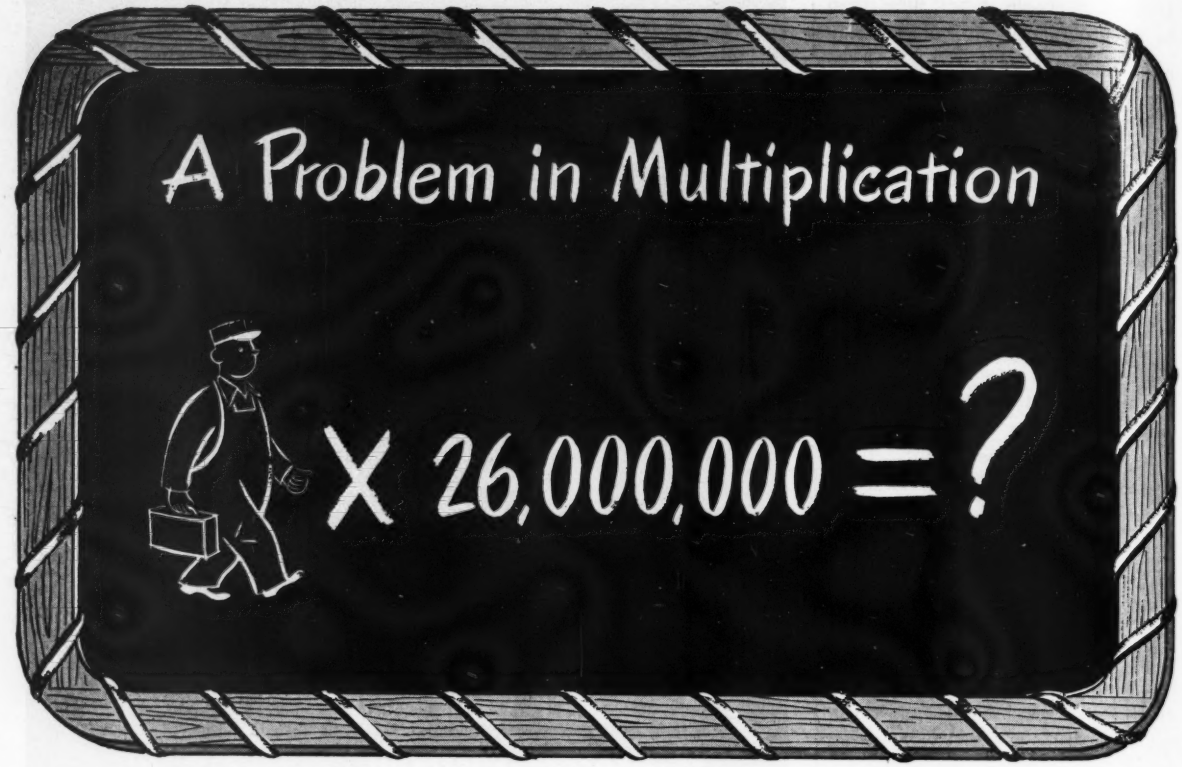
Popular types now possess added physical hardness

Even under the stress of round-the-clock wartime manufacture, Kodak's vigilance for the improvement of product is never relaxed. Thus the increase in physical hardness in Eastman Radia-Tized, Rapid-Processing, and Regular Dental X-ray Films is an important attainment available to you now—when you need it most. Specifically it means that these Eastman Dental X-ray Films can withstand *better than ever* the effects of summer temperatures during processing.

1895-1945 . . .
50th Anniversary of Roentgen's discovery of the x-ray

Eastman Kodak Company, Medical Division, Rochester 4, N. Y.

Kodak



Take the case of John Smith, average American:

For over three years now, he's been buying War Bonds through the Payroll Savings Plan. He's been putting away a good chunk of his earnings regularly—week in, week out. Forgetting about it.

He's accumulating money—maybe for the first time in his life. He's building up a reserve. He's taking advantage of higher wages to put himself in a solid financial position.

Now suppose *everybody* in the Payroll Plan—everybody who's earning more than he or she needs to live on—does what John Smith is doing. In other words, suppose you multiply John Smith by 26 million.

What do you get?

Why—you get a whole country that's just like John Smith! A solid, strong, healthy, prosperous America where everybody can work and earn and live in peace and comfort when this war is done.

For a country *can't help* being, as a whole, just what its people are individually!

If enough John Smiths are sound—their country's *got* to be!

The kind of future that America will have—that you and your family will have—is in your hands.

Right now, you have a grip on a *wonderful* future. Don't let loose of it for a second.

Hang onto your War Bonds!

BUY ALL THE BONDS YOU CAN...
KEEP ALL THE BONDS YOU BUY

THE DENTAL DIGEST

This is an official U. S. Treasury advertisement—prepared under auspices of Treasury Department and War Advertising Council

(*Continued from page* 395)

even more crucial task than winning the Four Freedoms is to achieve freedom for the personality, without which all other freedoms are of little avail."

"Save Paper," Says the Government . . .

Just as we are getting paper-saving conscious, we are confronted with the ten-page FISCAL AND MONETARY POLICY of the United States Treasury. Of all the waste of paper and strain on the postmen's backs, this message from Mr. Morgenthau, apparently sent to everybody who has bought war bonds, represents the most stupendous! I am still looking for one person of the hundreds of thousands who have received this report who will admit that he has read these words of high finance.

Mr. Morgenthau isn't the only offender in the Federal Government when it comes to wasting paper. Every week brings to every publication dozens of handouts, pamphlets, and reports, most of which could be left unprinted.

It is incongruous that in one breath the Treasury Department asks people to save and save, and in the next shows all the signs of a wastrel by dissipating tons of paper needlessly.

Doctors Must Eat . . .

Howard Vincent O'Brien, the *Chicago Daily News* columnist, dipped into the heart of medical economics when he wrote this:

"Widely held is the opinion that doctors should be above the petty things which concern the rest of us—ignoble trifles such as money. We would be piously shocked if any doctor said frankly that he was not in business for anything but his own health.

"Few of us would decline more pay for our services if we could get it. For the most part, we are unashamed of the profit motive—except in other people. We disapprove of it, especially in doctors. Most of us work for a combination of gain and interested occupation. We insist that

For A Limited Time Only
$9.00 TOTAL VALUE FOR ONLY $5.85
in the Lee Smith
CERTICEM ECONOMY PACKAGE

Contents	*Value*
5 F.P. Powders, 1 ea. Shade B-C-D and 2 Shade A	$5.00
2 F.P. Liquids	2.00
	$7.00

Special Offer Price—$5.85

Plus our FREE GIFT to you—

1 F.P. Powder, Shade C	$1.00	FREE
1 F.P. Liquid	1.00	

A good buy and an excellent product! For years Certicem has ranked among leading zinc phosphate cements.

Make the most of this opportunity to buy Certicem at a special rate. Phone your dealer NOW and place your order for the Certicem Economy Package.

LEE S. SMITH & SON MFG. CO., Pittsburgh 8, Penna.

Protection
FOR YOUR HYPODERMIC EQUIPMENT



A Waite Syringe Jar, filled with Zephiran Chloride, a disinfecting solution of unusually high germicidal and bacteriostatic potency, will provide you with a convenient, dependable method for protecting and maintaining the sterility of autoclaved hypodermic syringes and needles.
The Waite Jar readily accommodates 4 syringes with needles affixed and has space for extra needles and adaptors.

COOK-WAITE *Laboratories, Inc.*
170 Varick Street, New York 13, N. Y.
Laboratories: Wheeling, W. Va. & Springville, N. Y.

ZEPHIRAN CHLORIDE
Reg. Trademark Winthrop Chemical Co., Inc.

In your ORAL HYGIENE this month



QUALITY DENTISTRY FOR AMERICAN LABOR

"We face a serious problem which would not have arisen were it not for the fact that the people, especially workers, are now more than ever confused about the quality of dentistry because of the recently proposed and widely publicized dental plan for low-income groups." . . . You won't want to miss Doctor Alfred J. Asgis' article on page 1190.

★ ★ ★

"Servicewomen Will be Looking for Jobs, Too" . . . Will your former dental assistant, now in Service, return to your office after the war? T/Sergeant Jean Castles thinks she may not. Even if your dental assistant is *not* in service, you'll find the article on page 1186 good reading.

★ ★ ★

"A Double Warning to Dentists" . . . When a dentist is sick, his income stops. Doctor Frank P. Griffin took farsighted steps to make sure his wouldn't. He writes a cheerful story of his rainy day "under a big umbrella." There are plenty of good pointers in this article on page 1194.

★ ★ ★

"Ability is Not Enough" . . . You don't agree? . . . Perhaps you'll change your mind after looking at dentists through the eyes of Claire Hollinger. She's an oral surgeon's assistant and sees plenty of dentists, successful and unsuccessful. Her interesting analysis is on page 1198.

★ ★ ★

"Federal Medicine Advocate Shocked by Veterans Administration's Program" . . . Albert Deutsch, feature writer for the New York newspaper PM, wrote a splendid outspoken article for Medical Economics. It is digested for Oral Hygiene readers on page 1202.

★ ★ ★

"Mouth Infection and Industrial Health" . . . Doctor Earle H. Thomas quotes figures to show that an adequate health program can reduce accidents and occupational diseases 47 percent. Of course such a program includes dental health education, examination, treatment, or referral to competent dentists. You have a personal stake in the plan described by Doctor Thomas on page 1206.

★ ★ ★

"My Dentist is a Woman" . . . Raul Capurro, editor of a weekly magazine in Uruguay, is a modern-minded gentleman. His impressions of women dentists (page 1213) are well worth reading.

★ ★ ★

Seven short, interesting articles—and all of your favorite departments—are waiting to add pleasure to your precious leisure moments, in the pages of July Oral Hygiene.

doctors work only for the joy of working.

"This confusion condenses to a matter of definition. What *is* money, anyhow? Well, money, of itself, is nothing. It is merely a means for the gratification of many kinds of needs and desires. Money can be measured only by what it buys. Money is the outward and visible symbol of evaluation.

"A man may study medicine for a variety of reasons. He may have both taste and talent for it. He may feel that his bent will take him to fame and fortune—or both.

"He is at once scientist and man. As scientist, he may be keenly interested in the healing art. As man, he may want a yacht and a house in Palm Beach. His wife may want pearls and sables. His children may want expensive educations.

"To buy these things—which may not be the object of your desire or mine; but which are, in themselves, entirely legitimate—a doctor may elect to practice in those fields likely to bring him the largest financial return. He will charge for his services as much as the law of supply and demand permits.

"Another doctor may prefer the relatively low-paid work of research to the precariously competitive field of the specialist. He thinks he will be happier in a well equipped laboratory than in a house with a ten-car garage. A third may find more satisfaction in the out-patient clinic of a hospital than in curing the ailments of wealthy dowagers.

"It is all a matter of evaluation.

"A doctor is as entitled to the enjoyment of material things—if that is what he enjoys—as any man. The money-making doctor may be just as good, medically, as the one whose ascetic temperament makes him indifferent to the fleshpots.

"It is hypocritical on our part when we demand that a doctor take a vow of poverty with his Hippocratic oath. If a doctor wants to give away his time and skill, that is his privilege. If he wants rings on his fingers and a rating with Dun and Bradstreet, that is his privilege, too.



YOU'LL BOTH BENEFIT

1 You Recommend

Through your expert instructions on proper care of the mouth, and through your recommendation of Py-co-pay Tooth Powder and Brush as helpful aids to clean teeth . . . healthy gums . . . fresh mouth—**YOUR PATIENT WILL BENEFIT!**

2 Py-co-pay Reminds

TWICE EACH DAY Py-co-pay will remind your patient of you . . . through *you* he learned of these strictly ethical products and their adjunctive importance to the correct brushing technique which you taught.

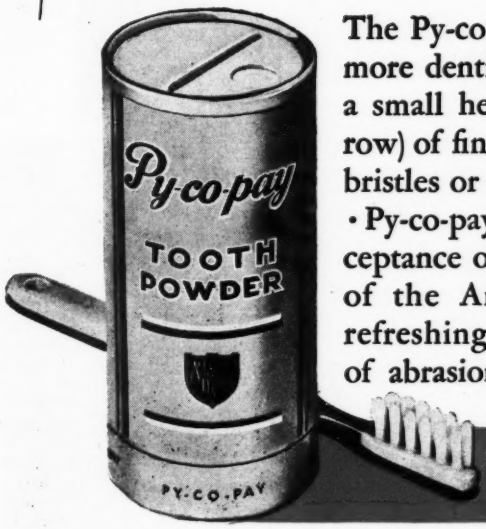


3 The Patient Remembers

Since (in being reminded of you through Py-co-pay) the patient will be helped to remember to visit you regularly for check-up, **YOU TOO WILL BENEFIT!**

Py-co-pay

TOOTH BRUSHES AND TOOTH POWDER



The Py-co-pay Tooth Brush is recommended by more dentists than any other tooth brush. It has a small head, containing two rows (6 tufts per row) of fine, firm bristles. Available with *natural* bristles or *nylon* in a complete range of textures. • Py-co-pay Tooth Powder bears the seal of acceptance of the Council on Dental Therapeutics of the American Dental Association. It is refreshing . . . and cleans with the minimum of abrasion required to remove surface stains.

PYCOPÉ, INC.
2 HIGH STREET, JERSEY CITY 6, N. J.

"A doctor is entitled to as much freedom of evaluation as we concede to ourselves. He is not a bondman of mankind. He should not be asked to live on a plane of ideals higher than that of those who consult him.

"As long as he is an honest workman, he is worthy of whatever hire he can command. What he does with his surplus of energy or wealth is strictly his private affair. He has the right to take his own course to man's common goal of self-satisfaction."

Up Go the Dues . . .

The Chicago Dental Society has voted to be self-supporting. By a vote of 10 to 1 the Society has approved an increase in annual dues from $5.00 to $15.00. In time other societies throughout the country probably will do likewise.

To undertake public services it is necessary that dental societies have sound financial policies. It is also necessary to have enough money in the treasury to finance good meetings and programs without depending on the whims of exhibitors.

Is the Dentist an Educated Man? . . .

When the millions of young men and women return from military service, many of them will be looking around for educational opportunities under the GI Bill of Rights. They will have to decide for themselves whether they want to be trained in some craft or trade or profession, or want to spend their time in receiving a fundamental education.

Dentists, for example, are well trained in techniques and are fairly well trained in the fundamental biologic sciences; however, so far as what they have received in dental college is concerned, they are totally uneducated in cultural subjects. The appalling inability of the average dentist to express himself clearly and adequately is an example. This fact of *trained people versus educated people* is a matter of concern to educators. Here is what a university president says:[2]

[2]Willard, A. C.: A Statement to the Members of the General Assembly, University of Illinois, 1945.

Others Have Tried BS POLISHERS Why Not You?

Many dentists have sent in the coupon below and found out why BS Polishers are preferred over many others. They can readily understand why this soft, flexible rubber polisher makes a patient feel safe and comfortable, also why it is easy for it to clean and polish every tooth to a lustre brightness. Why don't you find out these facts for yourself? Send the coupon in now!

BS POLISHERS ARE SMALLER AND MORE CONVENIENT TO USE

Young Dental Mfg. Co.
St. Louis 8, Mo.
Gentlemen:
Without any obligation send us one of your BS POLISHERS — ABSOLUTELY FREE.
NAME .....
ADDRESS .....
CITY .....
STATE .....



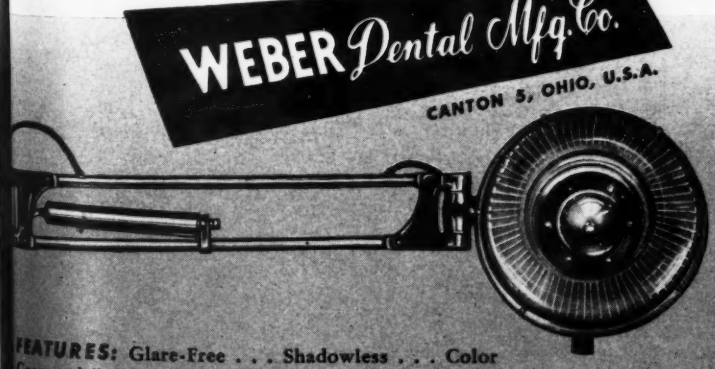
"We *train* men for all the professions and vocations, but we often fail to truly *educate* even those who receive collegiate degrees. They know little of the world of *men and affairs* in which they live. But possibly more disturbing and distressing is our failure to so arrange our collegiate educational programs that those who are able to remain in college for only a year or two will have received the *fundamentals* of a liberal education, and some knowledge of the world and of human society. Merely completing the study of a collection of college courses for which a degree is awarded as a prerequisite to enter some professional field is not a liberal education nor is it ever likely to produce a broadly educated man. Such a program does little or nothing to educate those students who for a variety of reasons are not able to complete such highly specialized programs."

The twenty thousand dental officers in military service will be eligible under the Servicemen's Readjust-

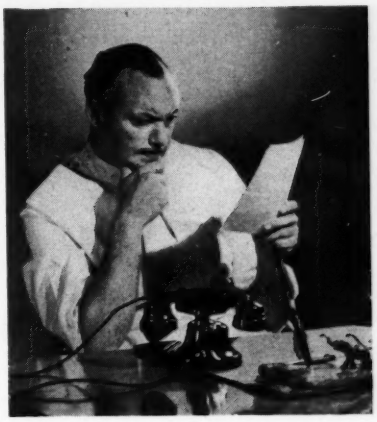
KOLORITE

Operating Light

If you have ever reflected the sun's rays with a mirror, then you have demonstrated the principle of Scialytic Lighting as incorporated in the new Weber KOLORITE Operating Light—excepting that instead of one mirror or lens—scores of them fixed at a definite angle around the circular light dome are used to gather light from a central source and then by refraction, transform each reflected ray into *one* horizontal curtain of concentrated light rays which are projected into the oral cavity. The result of this scientific development, is a *glareless, shadowless, color-corrected* light. Weber is proud to be the *first* Dental Manufacturer to make this "time-tested" principle available to the dental profession!



FEATURES: Glare-Free . . . Shadowless . . . Color Corrected (infra-red rays filtered out) Cooler . . . Greater Operating Field Illumination . . . Adjustable Beam to provide greater concentration of light. Greater Bracket Flexibility to meet all operating requirements . . . Adaptable to all types of Unit Equipment.



Have YOU ever examined your TIME LOSSES?

The time wasted in handling apprehensive patients, time losses due to operative pain interruptions, and the slowing down of procedures due to patients' sensitivity and nervousness involve only minutes in each instance, but over a period of time they combine to seriously reduce productive time. McKesson nitrous oxide pain control saves time and energy for both operator and patient. By controlling operative pain, time losses due to pain interruptions are avoided. By allaying apprehensiveness, chair time is conserved.

It will involve no obligation to let us tell you how McKesson nitrous oxide equipment can help you increase your productive time, conserve your energy and build patient goodwill and cooperation.

NARGRAF EUTHESOR EASOR

misfit dentures are seldom hopeless



Using the D-P 4-Step Technique, there are few dentures which cannot be rendered comfortable.

1 — Check for accuracy of fit with D-P INDICATOR GEL.

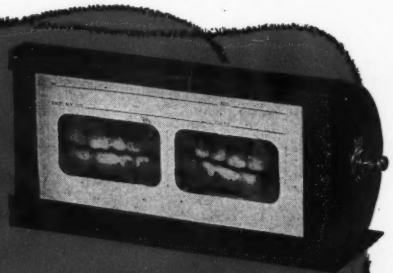
2 — Grind down high spots revealed.

3 — Recheck with INDICATOR GEL.

4 — After high spots have been relieved, reline with D-P DENTURLYNE. Allow material to set — in the mouth — for 24 hours. The material will have set as hard as the denture base itself and can then be polished.

DP DENTAL PERFECTION CO.
2323 W. WASHINGTON BLVD.
LOS ANGELES, CALIF.

The Bosworth
Winglite
Presents Wing Bite X-Rays to the Greatest Advantage



Place the WINGLITE in your patients' hands so they easily can see the Bite-Wings with the little red arrows on them indicating necessary dental work. You will then have CREATED INTEREST, SECURED ATTENTION, and EDUCATED YOUR PATIENT in all necessary steps to obtain DESIRED ACTION. This helpful, compact, streamlined WINGLITE, TESTED in every day use, is modestly priced at $7.00.

HARRY J. BOSWORTH CO.
1315 SO. MICHIGAN AVE. CHICAGO

ment Act to return to school for postgraduate or graduate study. Only a few of them, even of those who have been in Service three or four years, will be able to afford to take courses of more than three or four months' duration. Those men who would seriously like to take a year's postgraduate or graduate work will be prevented from doing so because they will not be able to support themselves with the $50 or $75 per month pittance from the Government. The result will be that most dental officers who do wish to expand their educations will be required to take courses of no longer than three months. The dental colleges of the country owe it to these men to see that the short courses that are given are packed full of information not only on dental techniques and the basic biologic sciences but on some cultural subjects as well.

The war has proved that by careful planning, by cutting out all the nonessentials, and by efficient management, college courses that previously required long classroom and laboratory courses can now be given in short periods of time. An example is the ability to teach foreign languages, and difficult ones at that, like Japanese, in a matter of three or four months. Too much time has always been wasted on nonessential things in the dental curriculum. The dentists in military service are not going to look kindly to any postgraduate or graduate courses that are poorly organized and that will waste their time. The dental school that has the foresight and the administrative skill to organize tightly packed, well planned courses given by superior teachers will have enthusiastic enrollees.

"Always and Never" . . .

You never realize how dangerous words are until you begin putting them down on paper and transferring them to type. It is so easy to say a thing clumsily. Readers ascribe meaning to words that the writer did not intend. That is communication failure.

(*Continued on page* 408)

JUSTI RESEARCH Suggests:

FROM JUSTI-FACTS #41
(Dental Survey, May 1945)

*. . Recent Rockwell tests, after water immersion at 98°
, indicate that the teeth (DENTA PEARL "CYCLO-MOLD"
ASTIC TEETH) are as much as 14% harder than standard
:ite or Plexigas sheet. These tests were made by an un-
ased testing company ★ Preliminary abrasion tests in-
:ate that an average patient would, upon 150 hours
ntinous chewing, reduce his vertical dimension only three
ty-fourths of an inch—if he were chewing pumice!"*

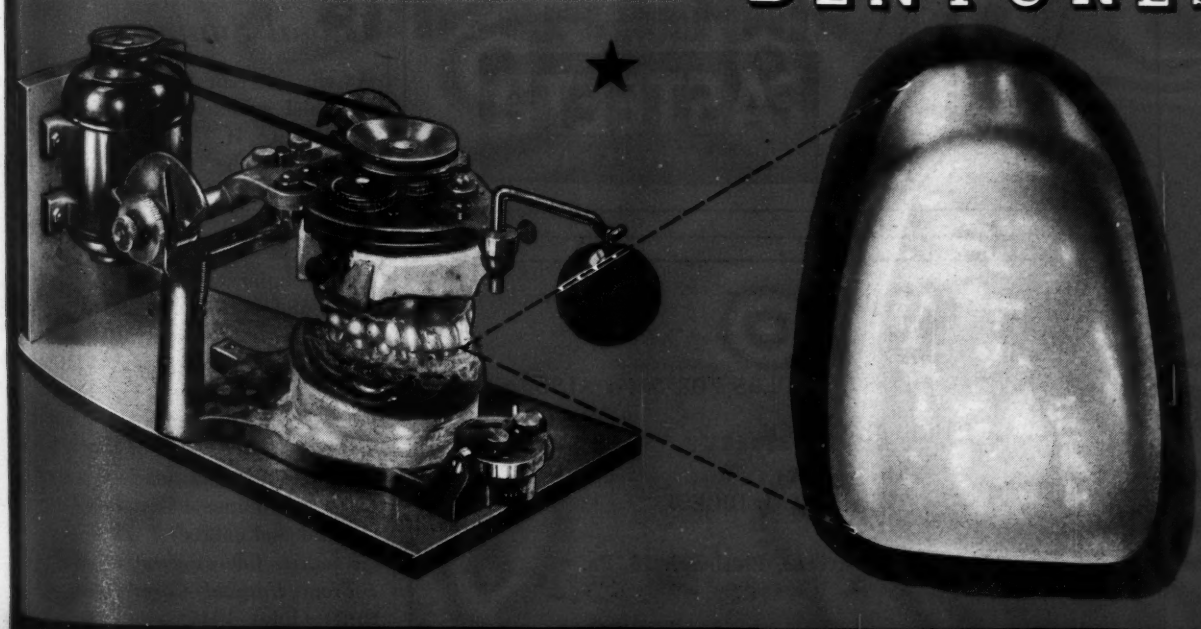
• • •

e wear of properly processed acrylic teeth will vary with the
ient and his eating habits. The wear of acrylic teeth on the
rage patient will be ***negligible,*** probably less than alveolar
sorption, but enough to maintain denture balance. The wear of
rylic teeth ***if moderate,*** over a period of five or six years, will
aggravate but will minimize alveolar absorption by maintaining
lanced occlusion. The wear of acrylic teeth ***if extensive*** will be
less consequence than would the many fractures, loss of balance,
nd loss of stability attendant upon a similar porcelain tooth res-
oration. The wear of acrylic teeth, if actually occurring during the
seful life of the denture, is an actual advantage to the supporting
ructures,—to the patient, and to the dentist.

(Additional data available on request)

THE
HARDER!
DENTA PEARL
Cyclo-Mold
PLASTIC TEETH

UNCONDITIONALLY
RECOMMENDED FOR
FULL DENTURES



Products with a Single Purpose - Better Dentistry

D. JUSTI & SON, INC., PHILADELPHIA 4, PA. RELIABLE DENTAL PRODUCTS SINCE 1864

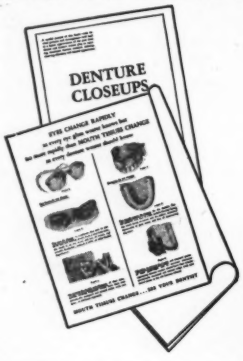


DENTURE PATIENTS DON'T COME BACK

A recent survey shows that only 33.2% of all denture wearers ever find their way back to a dental office. Apparently, when normal resorption occurs patients do not realize that this condition demands their dentists' assistance.

Many dentists believe that adequate instruction at the chair will eventually correct this attitude. In the belief that pictures speak stronger than words the brochure "Denture Closeups" was developed. It describes graphically the story of tissue resorption and "when mouth tissues change—see your dentist."

Write for your free copy of "Denture Closeups" today.



CLARK-CLEVELAND, INC., Binghamton, N. Y.

FASTEETH
Alkaline DENTURE POWDER

AVAILABLE:

DENTAL DIGEST BINDERS FOR 1944; ALSO 1945. PRICE, $1.75 EACH.

THE DENTAL DIGEST

1005 Liberty Avenue, Pittsburgh 22, Pa.

(*Continued from page* 406)

The best writing is the most direct, the simplest, the most specific and concrete. It is best because it is easiest to read and to comprehend. When you have to read a pretty sentence two or three times to get the meaning, you can be sure that you are not looking at a piece of good writing. Fancy architecture and frilly clothes are not in the modern spirit of usefulness. Neither is fancy writing.

As bad as gaudy writing is dogmatic expression. Recently Doctor Charles B. Congdon has warned: "*Always* and *never* are two words you must always remember never to use in Medicine." This warning, of course, should apply to all writing. A dentist cannot *always* take an impression by one certain method because no two conditions are ever exactly alike. There are *always* variables, and with variables "always" goes out the window. It is senseless to say, "*Never* extract an acutely infected tooth," because in some cases that is the only treatment that can bring relief. *Always* and *never* are frozen and inflexible words that are not true to the fluidity of life facts. The use of dogmatic words may reflect dogmatic thinking, and that is the enemy of progress.—E. J. R.

Treatment of Labial Sunburn

An effective remedy in the treatment of labial sunburn was reported by Lieutenant H. Greenfield (DC) USNR in the *Military Surgeon* (April 1945). He advocates the use of Butyn-Metaphen dental ointment on lips cracked open by the sun.

The ointment contains 4 per cent butyn and 1:1500 metaphen. It acts as an anesthetic depressing the local nerve endings, while the metaphen is a powerful germicide. Lieutenant Greenfield recommends daily applications for three days or longer but has found two days sufficient in some cases. The ointment is standard supply in dental outfits for use in alveolar sockets following extractions.
—From *Hospital Corps Quarterly*, 18:29 (July) 1945.



Your own, and gift subscriptions

Magazine subscriptions, for service men and other friends, are ideal gifts, regular reminders of your thoughtfulness. At no extra cost to yourself, you can place them with a dentist whose illness keeps him from practicing. But he won't quit trying to support his wife and little son. You can send him your orders now, at publishers' regular rates:

The Reader's Digest: $3 yearly; $5 for 2 years; gifts for service men, $1.50 yearly.

Coronet: $3 yearly; gifts for service men, $1.50 yearly. *Esquire*: $5 yearly.

Time: Minimum subscription 2 years, $9; gifts for service men, 2 years, $6.

Life: Minimum subscription 2 years, $9; gifts for service men, 2 years, $6.

Fortune: Minimum subscription 2 years, $15; gifts for service men, 2 years, $11.

Newsweek: $5 yearly; gifts for service men, $3.50 yearly.

You may also include subscriptions for any other magazines.

Please make your checks payable to the magazines themselves, but send to

RUSSELL PANZICA, D.D.S.
717 Seventh St.,
Buffalo 13, N. Y.

(A penny postal will bring subscription prices on other magazines.)

CLINICAL AND LABORATORY SUGGESTIONS

Form to be Used by Contributors

To: Clinical and Laboratory Suggestions Editor
THE DENTAL DIGEST
708 Church Street
Evanston, Illinois

From: _____

_____

Subject: _____

Explanation of Procedure:

Sketch:

$10 will be paid to author on publication of accepted suggestion.

Penicillin Packs in the Treatment of Vincent's Infection

(*Continued from page* 386)

until a state of apparent "normality" has prevailed for one week. Scaling was done where necessary, but no form of constitutional treatment was carried out. The patients were instructed not to use any form of mouthwashes or toothpastes in order that antiseptics would not affect the action of the penicillin.

Daily smears and clinical notes were taken to check the progress of treatment. Penicillin packs were inserted daily until an apparent clinical and bacteriologic cure was effected.

Results

The following observations were made from the fifteen cases treated:

1. Patients became asymptomatic in twenty-four hours. Pain had vanished, bleeding had decreased, and in the severe cases a good night's sleep had been enjoyed.

2. Sloughs separated in thirty-six to forty-eight hours, but in most cases the gingival sloughs separated earlier.

3. In four to five days the ulcers were epithelializing, and in no case was packing continued after five days.

4. In four to five days microscopic examination of the slides revealed that the fusospirochetal symbiosis had disappeared; only a few organisms could be detected at this stage. Two patients were undergoing treatment for syphilis with intravenous arsenicals, and it was interesting to note that they exhibited a most severe form of the disease. One of them had been treated with chromic acid sporadically for six months, and deep pockets with a bismuth line were present.

—From *The British Dental Journal*, 78:292 (May 18) 1945.

Buy War Bonds

Replantation of Teeth

Lieut. ROBERT H. ALEXANDER (DC) USNR

Replantation (reinsertion) of a tooth in its original socket from which it has been dislodged either by accident or design today may save many teeth that would otherwise be lost because of lack of prosthetic facilities in certain war areas. Even in zones where prosthetic service is readily available, immediate replantation may be the treatment of choice. The technique is comparatively simple, even under most adverse conditions. Furthermore, the successful replantation of a tooth is more satisfactory in some respects than any prosthetic replacement.

The following techniques have been used and are advocated for the replantation of single-rooted teeth.

Replantation Without Devitalization

1. No anesthetic is necessary. The dislodged tooth is washed under clean running water and carefully wiped with 70 per cent alcohol.

2. The socket is cleaned of its blood clot and irrigated with warm saline solution, and the tooth is replanted immediately, but only to a point 2 millimeters short of its original position in the socket. This is done in the hope that the small blood clot at the apex will form the scaffolding for the new blood vessels and nerves which will rejoin those of the tooth.

3. The adjacent teeth are dried thoroughly by means of alcohol and air syringe. A large, loose mix of crown and bridge cement is then applied and allowed to flow over the labial and lingual surfaces of the replanted tooth and one or two teeth on either side, working the cement interproximally. As the cement begins to harden, it becomes possible to build it up to a thickness varying from 2 to 4 millimeters. This thickness is required for adequate strength and is tolerated easily by the patient.

4. The splint and tooth must be protected from the stresses of mastication. It is usually necessary, therefore, to open the bite by applying small blocks of cement about 2 millimeters thick on the occlusal surfaces of the lower posterior teeth. The splint will last from three to five weeks, the period necessary for immobilization of the tooth. If for any reason the splint becomes dislodged, however, it should be replaced immediately.

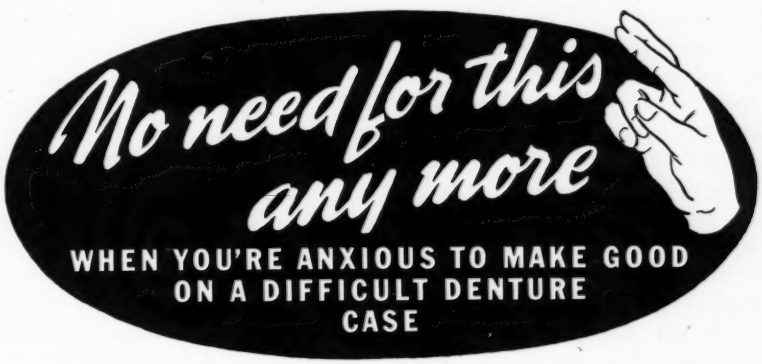
5. After five weeks the splint and the cement blocks on the occlusal surfaces of the molars are removed. The elongated incisal edge of the replanted tooth is then carefully ground down with a stone.

6. Pulp vitality tests should be made after six or eight weeks, after eight or ten months, and then every six months. Roentgenograms should be taken periodically to determine the progress of bone formation.

Replantation After Devitalization

The technique of replantation of the tooth which is first devitalized is similar to the one just described.

1. After the socket has been cleaned



One of those "hard-mouth" cases, for instance, where the thin mucosa provides little or none of the "cushion" which in most mouths serves to compensate for denture inaccuracies and thus afford at least temporarily satisfactory adaptation. But to be comfortable—even tolerable—in a hard mouth, the denture must bear *evenly* on every square millimeter of tissue surface. It must really *fit*—not just where necessary for retention, but *all over*—and right from the moment of insertion.

Vitally important in such cases, this perfection of fit is of course desirable in *all* cases. The absence of areas of overload automatically eliminates the principal cause of resorption, and makes for greater *permanence* of adaptation and retention.

You can now be assured of this ideal result through the perfection of modern precision casting processes, plus a fundamental departure from traditional practice in metal-base design. Learn more about this epochal advancement in denture construction. Be among the first to make it available to those discriminating patients who want and expect the highest type of denture service.

SEND FOR THIS BOOKLET AND DECIDE FOR YOURSELF!



The Dresch Laboratories Company
335 Superior Street • Toledo 1, Ohio

Please send me your booklet "THE METAL BASE DENTURE"

Dr. .....

Street Address .....

City and State .....

D7

of the blood clot, it is plugged with sterile gauze covered with sulfanilamide powder.

2. The tooth is washed under tap water, wiped with alcohol, and while it is held in a sterile gauze sponge saturated with normal saline solution, the root canal is opened and its contents removed.

3. The canal is flushed with phenol and alcohol solutions, dried, and filled with chloropercha and guttapercha points well condensed. The excess from the apical end is burnished smooth with a hot instrument.

4. After the tooth has been examined to make sure that there are no calcific deposits adhering, the gauze pack is removed from the socket, and the tooth dusted with sulfanilamide powder, and inserted *completely* into the socket.

5. The splinting technique is the same as previously described. Follow-up roentgenograms should be taken frequently.

It is impossible to describe a technique which would apply to all cases of replantation. The judgment of the operator is most important in the handling of cases in which the alveolus has been sprung or fractured, or where the bite is such that the position and form of the cement splint must be varied. If interproximal caries is found on the dislodged tooth, a restoration should be placed before replantation of the tooth.

Preservation of Periodontal Membrane

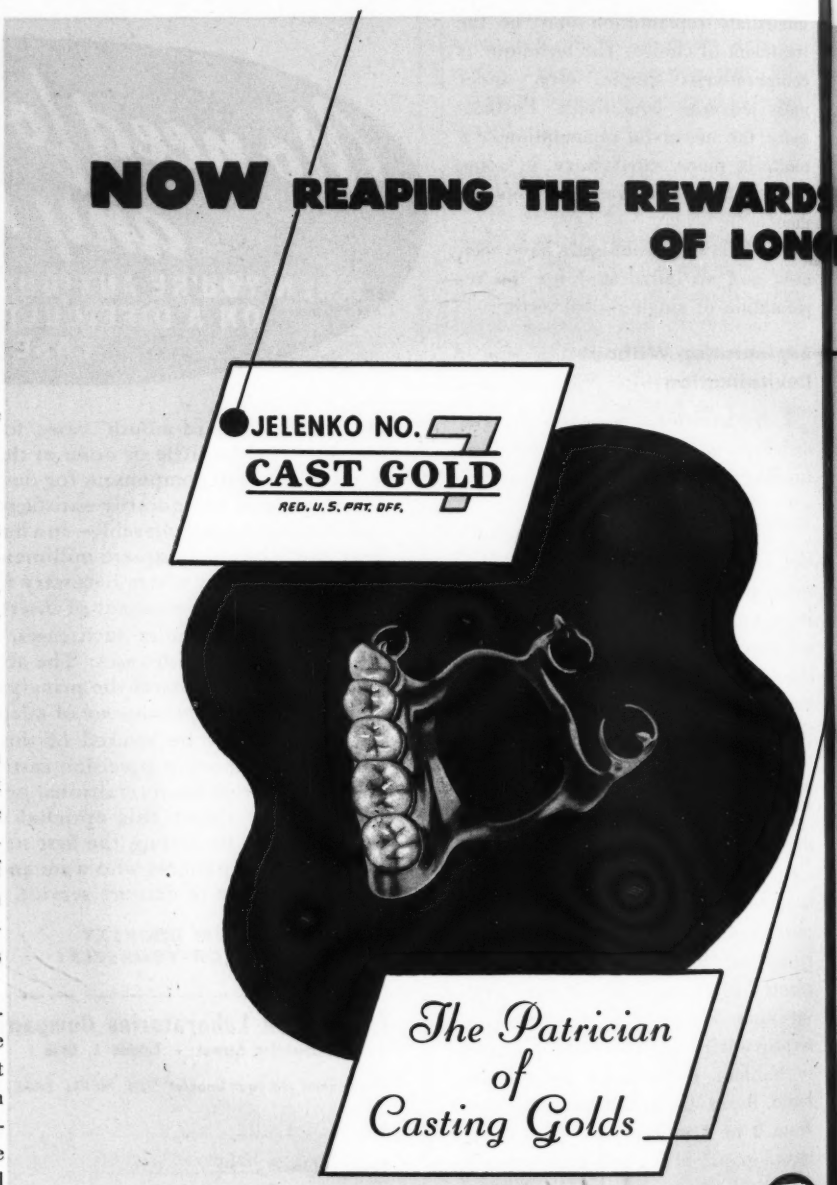
In all reports on replantation, from that of John Hunter to the present day, the importance of preserving the periodontal membrane has been emphasized. Inasmuch as no study of the histopathology of replanted teeth in humans has been recorded, however, any discussion of this aspect is purely speculative.

The failure of the completely denuded root to reattach itself and the fact that the chances of reattachment increase as the time interval between extraction and replantation is shortened, point directly to the importance of the preservation of the periodontal membrane. In any technique, therefore, it is obvious that great care should be taken that the periodontal membrane on the dislodged tooth will not be damaged further.

Comments

With the tooth outside the mouth, sterilization of the root canal can be achieved readily and a well condensed filling placed. This is done at a time when the germicidal permeability of the root dentine is greatest. Complete eradication of infection is essential to the success of any root canal operation.

It has been the experience of many investigators that the roots of replanted teeth ultimately will show noticeable resorption, sometimes as early as three years after replantation. For this reason the extraction and replantation of a tooth for the sole purpose of insertion of a root canal filling is not considered justified. The numerous successful cases of root canal therapy done on teeth in



place would make the latter technique by far the one of choice.

Finally, and of great importance, is the follow-up of these cases for as long as possible. Only in this way can the method be improved. The patient should be told at what intervals to have roentgenographic studies made and also to inform the operator regarding subjective symptoms as he notices them.—From *United States Naval Medical Bulletin*, 45:126-134 (July) 1945.

BUY WAR BONDS AND STAMPS

PROFESSIONAL CONFIDENCE

There is only one reason any dentist ever used Jelenko No. 7 — its promise of superlative quality, performance and service. There is only one reason a dentist who once uses Jelenko No. 7 continues to use it, and to depend on it more and more for his cast partials and bridgework — it more than fulfills every promise. On this confidence has grown the unprecedented demand which Jelenko No. 7 enjoys today.

It will win your confidence, too, if you use it once.

for 1-piece and Unit Castings, Clasps, Bars, Saddles, etc.
GOLD COLOR
per dwt. $2.00



Cast by
JELENKO THERMOTROL

Sold by Better Dealers — Available from Better Laboratories Everywhere
Send Your Scrap to Jelenko — Accurate Assay — Prompt Report

J. F. Jelenko & Co., Inc.
Manufacturers of Dental Golds & Specialties
136 West 52nd Street · New York 19 U. S. A.

Z·M

Those physical properties designated in A.D.A. Specification for dental cements are found in perfect balance in Z-M Crown and Bridge Cement. Specially compounded by Ames for dentists who want this type of cement at its very best. The price is attractive, 1 oz. Powder $1.00, 14CC Liquid $1.00, three $2.00 units $5.00.

The W. V-B. Ames Company
Fremont, Ohio

Crown and Bridge
CEMENT

OUR LINE IS **STILL COMPLETE**

FREE CATALOGUES AND SAMPLES

- STATIONERY
- BOOKKEEPING ITEMS
- PATIENTS' RECORDS
- FILE CABINETS
- MISCELLANEOUS HARD-TO-GET ITEMS

WE SERVE OVER 50,000 DOCTORS
PROFESSIONAL
PRINTING COMPANY, INC.
AMERICA'S LARGEST PRINTERS TO THE PROFESSIONS
15 EAST 22nd STREET NEW YORK 10, N. Y.

See second cover D.D.7

UNIVERSAL DENTAL CO.
48TH & BROWN STS., PHILADELPHIA, PA.

Please send brochure mentioned in ad.

Dr. .....

Address .....

City .....

See pages 354-55 D.D.7

VERNON-BENSHOFF CO.
P. O. BOX 1587, PITTSBURGH 30, PA.

Please send copy of Vernonite booklet.

Dr. .....

Address .....

City .....

See page 356 D.D.7

COREGA CHEMICAL CO.
208 ST. CLAIR AVE., N. W., CLEVELAND, O.

Please send Corega samples.

Dr. .....

Address .....

City .....

See pages 358-59 D.D.7

WERNET DENTAL MFG. CO., DEPT. 15-G
190 BALDWIN AVE., JERSEY CITY, N. J.

Please send free supply of Wernet's Powder.

Dr. .....

Address .....

City .....

See page 392 D.D.7

WILMOT CASTLE CO.
1123 UNIVERSITY AVE., ROCHESTER 7, N. Y.

Please send information concerning Castle Lights.

Dr. .....

Address .....

City .....

See pages 394-401 D.D.7

COOK-WAITE LABORATORIES, INC.
170 VARICK ST., NEW YORK 13, N. Y.

Please send information concerning Cook-Waite products.

Dr. .....

Address .....

City .....

See page 404 D.D.7

YOUNG DENTAL MFG. CO.
ST. LOUIS 8, MO.

Please send sample BS Polisher.

Dr. .....

Address .....

City .....



See pages 404-05 D.D.7

WEBER DENTAL MFG. CO.
CANTON 5, OHIO.

Please send information concerning the new Kolorite.

Dr. .....

Address .....

City .....

See page 405 D.D.7

MCKESSON APPLIANCE CO.
TOLEDO, OHIO.

Please send information concerning your equipment.

Dr. .....

Address .....

City .....